TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

MEETING MATERIALS

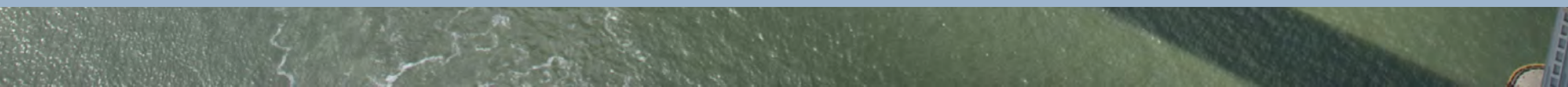
June 6, 2013

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Caltrans

BAY AREA TOLL AUTHORITY

STATE OF CALIFORNIA
CALIFORNIA TRANSPORTATION COMMISSION



TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Letter of Transmittal

TO: Toll Bridge Program Oversight Committee (TBPOC)

DATE: May 31, 2013

FR: Program Management Team (PMT)

RE: TBPOC Meeting Materials Packet – June 6, 2013

Herewith is the TBPOC Meeting Materials Packet for the June 6th meeting. The packet includes memoranda and reports that will be presented at the meeting. A Table of Contents is provided following the Agenda to help locate specific topics.

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Revised Final Agenda

TBPOC MEETING
June 6, 2013, 1:00pm – 5:00pm
1120 N Street, Sacramento, CA
TBPOC-PMT pre-briefing: 1:00pm – 1:30pm
TBPOC meeting: 1:30pm – 2:30pm
TBPOC workshop: 2:30pm – 5:00pm

	Topic	Presenter	Time	Desired Outcome
1.	**CHAIR'S REPORT**	S. Heminger, BATA		Information
2.	**CONSENT CALENDAR** a. TBPOC Meeting Minutes 1. April 17, 2013 Meeting Minutes* 2. May 1, 2013 Meeting Minutes* 3. May 7, 2013 Conference Call Minutes* 4. May 9, 2013 Meeting Minutes* 5. May 15, 2013 Meeting Minutes* b. Contract Change Orders (CCOs) 1. CCO 601-S0 (YBITS2), W4 Substation Upgrades, Not to Exceed $1,500,000* 2. CCO 150-S1 (SAS), BASE Camera Installation, Not to Exceed $1,400,000* 3. CCO 159-S1 (YBITS1), YBI Tunnel Upper Deck LED Lighting, $1,346,090* 4. CCO 184-S0 (YBITS1), YBI Tunnel Polyester Concrete Overlay, $2,955,215* 5. CCO 33-S1 (OTD2), Extend Maintenance of Temporary Trestle, $238,25* 6. CCO 911-S0 (YBITS1), CCTV Security Camera Networking and Video Management System, $1,500,000*	A. Fremier, BATA D. Noel, CTC		Approval Approval
3.	**PROGRESS REPORTS** a. Project Progress and Financial Update May 2013***	P. Lee, BATA	5 min	Information
4.	**PROGRAM ISSUES** a. Bay Bridge East Span Opening Celebration b. Sawtooth (IERBYS) Building and Site Improvements *	S. Maller, CTC A. Fremier, BATA	5 min 15 min	Information Approval
5.	**SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES** a. E2 Update 1. Budget Authorization*	PMT T. Anziano, CT	15 min 5 min	Information Approval

Topic	Presenter	Time	Desired Outcome
2. Testing Program*	T. Anziano, CT	5 min	Information
3. Contract Change Orders*: 313, 320, 325, 326, & 327	T. Anziano, CT	5 min	Approval
b. Corridor Update/ Schedule*	T. Anziano, CT	5 min	Information
1. Labor Day Weekend Construction Schedule*	D. Vilcheck, CT	5 min	Information
2. Labor Day Communications Plan*	A. Gordon, BATA	5 min	Approval
6. OTHER BUSINESS			
Next TBPOC Meeting: July 11, 2013, 10:00am – 1:00pm **Mission Bay Office, Oakland, CA**			

* Attachments
**Attachments at end of binder
***Attachments to be sent under separate cover

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE
CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

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TBPOC MEETING
June 6, 2013

TOLL BRIDGE PROGRAM
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TBPOC MEETING
June 6, 2013

* Attachments
** Attachments at end of binder
*** Attachments to be sent under separate cover

ITEM 1: CHAIR'S REPORT

No Attachments

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS | BAY AREA TOLL AUTHORITY | CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

RE: Agenda No. - 2a1

Item- Consent Calendar
TBPOC Meeting Minutes
April 17, 2013 Meeting Minutes

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Program Management Team has reviewed and requests TBPOC approval of the April 17, 2013 Meeting Minutes.

Attachment(s):
April 17, 2013 Meeting Minutes

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

TBPOC MEETING MINUTES

April 17, 2013, 9:00 AM – 1200 PM
Mission Bay Office, 325 Burma Road, Oakland, CA

Attendees: TBPOC Members: Steve Heminger (Chair), Andre Boutros, and Malcolm Dougherty
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller
Participants: Rosme Aguilar, Ade Akinsanya, Bill Casey, Clive Endress. Rich Foley, John Goodwin, Andrew Gordon, Ted Hall, Peter Lee, Brian Maroney, Steve Matty, Dina Noel, Will Shuck, Trish Stoops, Ken Terpstra, and Mazen Wahbeh
Guests: ABF: Brian Petersen, Peter Vander Waart, Bob Kick; TY Lin/M&N: Marwan Nader; IBECA: Salim Brahimi; CMF: Conrad Christensen

Convened: 9:00 AM

Items	Action
E-2 BOLTS WORKSHOP 1. What fix should be installed? – BATA Commission Meetings: 4/28 & 5/8/13 2. Should 2010 bolts be replaced? BATA Commission Meetings: 4/28 & 5/8/13 3. What caused 2008 bolts to fail? BATA Commission Meeting: 4/28/13	
1. What fix should be installed? Currently there are 3 design alternatives underway (please refer to attached handouts provided in the meeting): A. Option A - Replace bolts, same as original design - Status: Design at 65%. This option would replace anchor rods and would require removal of shear keys; cut and removal of anchor rods in stages. Then re-installing shear keys, install rod extensions in stages, and grouting. Because of constructability	• TBPOC instructed the team to eliminate Option A, and continue developing Options BD1, BD2, and C to 65% design, continue providing design status update to TBPOC on a weekly basis. Design JV targeted that 65% design on Option BD and C to be completed by end of April. • Team advised TBPOC of implementation cost of either of

(Continued)

Items	Action
and damage to shear keys risk issues, Team suggested to eliminate this option B. Option BD - Steel Collars, new design implementation of adding metal frame grillage around housing to hold it down- Status: Design at 45%. Does not require removal of shear keys and anchor bolts, potentially fast construction, however would require more coring and PT placement. Team is pursuing 2 alternatives within this option, design performance are same for both alternatives, schedule time may vary: a. BD1- Requires more upfront fabrication, and less time in construction (requires welding during fabrication and also on site during assembly) b. BD2- Less fabrication time and more work during construction, concept includes stacked plates of different size plates clamped together. Construction could start right after milling of plates, with only some plates requires fabrication (no welding required during fabrication or on site during assembly). C. Option C – Pre-Stressed Collars, new design implementation of post tensioning strands - Status: Design at 30%. This option has more concrete work and less steel. The main steel element is fabrication of saddle and post tensioning tie-down. Option C requires unique saddle system and extension of concrete cap construction, not as developed as Option BD. 2. Should 2010 bolts be replaced? Salim Brahimi, metallurgist working for ABF (also Chairman of ASTM International	the selected retrofit options would be around $10M (the amount does not include replacement of 2010 rods). Scope, cost and schedule in development as design progresses. • TBPOC indicated that Department has authorization to go ahead with fabrication of what is needed for Options BD, and C (it was noted that some of material fabricated for Option BD could be used for Option C, also some material ordered for BD2 could be used for the fabrication of BD1), for amount of up to $4.3M which includes some upfront work, detailing, material placement and book for fabrication shop space (the amount was authorized per 4/11/12 TBPOC conference call meeting). • TBPOC advised the team to start the lab test on a selected number of bolts (to be decided by the team) as

Items	Action
F116 Fasteners Committee), briefed TBPOC that the performance of the 2010 bolts appears thus far to have better uniformity and toughness than 2008. He also indicated that he could not fully answer this question until 2010 bolts have completed the metallurgic examination for the selected bolts (total of 10), this examination would determine the mechanical and physical properties. ABF has completed the In-Situ tensioning of 192 bolts (the 2010 bolts) on 4/9/13, after the 30-day waiting period by May 9th, extended lab test to start on 10 bolts. It was estimated final reports on the extended lab test result would not be available until about one month later (around 6/10/2013). The Chair asked if in the event the 192 bolts (S3, S4, and B1-B4) needed to be replaced; can construction of retrofit work (S1 & S2) and re-installation of 192 bolts be performed at the same time. ABF indicated that the existing truss working platform for the retrofit work would be in the way of re-installing some of the 192 bolts and the 2 operations could not be performed at the same time due to work space limitations and physical interferences. <u>3. What Caused 2008 bolts to fail?</u> Salim Brahimi indicated that the following combination of factors caused this failure: • High-end hardness • Low-end ductility (toughness) • Incomplete transformation of the metal, and • High stress along with some	soon as possible. • Report to TBPOC after workshop. • Team to meet in the afternoon on 4/17/13 to follow up discussion of whether the same bolts will be re-ordered for the 10 replacement bolts, or if supplemental requirements would be specified.

Items	Action
presence of hydrogen Salim stated the material met specification; however, additional requirements could have been given to manufacturer. Salim indicated that the lab result shows hydrogen in the metal. At this point, one could not determine whether this resulted due to manufacturing or due to environment (water in the pier cap).	

Adjourned: 12:00 PM

TBPOC MEETING MINUTES
April 17, 2013, 9:00 AM – 12:00 PM

APPROVED BY:

_____ _____
STEVE HEMINGER, TBPOC Chair Date
Executive Director, Bay Area Toll Authority

_____ _____
ANDRE BOUTROS, Date
Executive Director, California Transportation Commission

_____ _____
MALCOLM DOUGHERTY Date
Director, California Department of Transportation

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

RE: Agenda No. - 2a2

Item- Consent Calendar
TBPOC Meeting Minutes
May 1, 2013 Meeting Minutes

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Program Management Team has reviewed and requests TBPOC approval of the May 1, 2013 Meeting Minutes.

Attachment(s):
May 1, 2013 Meeting Minutes

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

TBPOC MEETING MINUTES

May 1, 2013, 2:00 PM – 5:00 PM
Director's Conference Room, 1120 N Street
Sacramento, CA

Attendees: TBPOC Members: Steve Heminger (Chair), Andre Boutros, and Malcolm Dougherty
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller
Participants: Ade Akinsanya, Bill Casey, Michele DiFrancia, Rich Foley, Andrew Gordon, Ted Hall, Keith Hoffman, Beatriz Lacson, Richard Land, Peter Lee, Brian Maroney, Steve Matty, Dina Noel, Trish Stoops, Ken Terpstra, and Mazen Wabeh
Guests: BTH: Brian Kelly, Gareth Lacy; TY Lin:/M&N: Bob Dameron, Dennis Jang, Marwan Nader, Eric Nichol, Alvaro Piedrahita, Daniel Turner, Hayal Tazir, Ashley Takata; ABF: Brian Petersen; Peer Review Panel: John Fisher and Frieder Seible (via phone)

Convened: 2:25 PM

Items	Action
1. CHAIR'S REPORT • The Chair requested a moment of silence for Robert Jones and Sean Baker, Department employees who lost their lives in the line of duty last week. • The Chair expressed sentiments about the 16 years that he has been involved in this project. o We need to gain public confidence that we can deliver a safe bridge. Open the bridge as quickly as we can, but not if we are not ready.	
2. PROGRESS REPORTS a. 2013 First Quarter Project Progress and Financial Update • Cover letter to Legislature needs to be revised. o P. Lee indicated that the deadline for transmitting this report to the Legislature is May 14, 2013.	• The TBPOC deferred action on this item until next week.

Items	Action
3. SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES a. Status Update on Anchor Rods 1. Retrofit strategy for 2008 rods – scope/schedule/budget, with PMT recommendation 2. Replacement strategy, if necessary, for 2010 rod 3. Additional inspection or testing of other SAS rods 4. History of rods and design selection 5. Bidder inquiries, per original and 2nd bids 6. Bridge opening LDW, per answers to Q1 – Q5 • The Chair indicated that he had a lot of questions, some of which pertained to: 1) E2 bolts bearing any loads; 2) Other U.S. fabricators willing to supply A354 BD bolts other than Dyson; 3) Particle testing (a) Magnetic testing; (b) Per Dyson CEO, there was a requirement to do magnetic particle testing on 2010 bolts; 4) What to do with the metallurgical report. • Copies of reference booklets on Retrofit Alternatives for Shear Keys S1 & S2, Progress Issue 4/30/2013, with pertinent drawings and matrices, were handed out. o <u>1. Retrofit strategy for 2008 rods</u> B. Maroney referred to page 2 of the booklet and with the help of a mockup of the SAS Pier E2 bearings and shear keys, and bolt samples, demonstrated Alternatives BD (Steel Collars) and C (Pre-stressed Collars), described the major steps required for each alternative and compared the pros and cons for each.	

Items	Action
➢ At 65% design, estimated cost (with contingency and mark-up) for Alt. BD is $16 million and for Alt. C, $5 million. ➢ Alt. BD requires more work and a lot of steel and coring; Alt. C requires less coring and is five times stronger than normal steel. ➢ B. Maroney/M. Nader agreed that Alt. C is faster and requires less work than Alt. BD. While both options work, cost advantage, potential schedule benefits, complexities, and confidence level all seem to favor Alt. C. o Recommendation: ➢ B. Petersen indicated that design details change every day. While Alt. BD was an early frontrunner, recent input received leaves them leaning towards Alt. C; but the process is not over and there is more work to be done before a decision can be made on which option to implement. ➢ The Peer Review Panel members have just received the plans, which they will study over the weekend. A conference call is scheduled for Monday, May 6, with B. Maroney and team. Preliminary indication is they are not leaning toward Alt. BD. ➢ Having just received the information, the PMT indicated they require more time to study the data before presenting their recommendation as a group. o Discussion items included: when to purchase materials, source(s) of steel, quality of steel, availability of quantity of steel required, source of PT strands. o <u>2. Replacement strategy for 2010 rods</u> B. Maroney referred to the last 5 pages of the reference booklet that cover testing of 2008 A354 BD anchor rods (96) vs. testing of 2010 A354 BD anchor	• ABF, the Peer Review Panel, and the PMT to present their recommendations to the TBPOC at their May 7 conference call.

Items	Action
rods (192). o Discussion items included: tests (mechanical, chemical, charpy, etc.) performed on two 2008 anchor rods; in-situ tensioning of 192 2010 rods, testing of four full-size sample rods (e.g., mechanical, wet test, in-situ hardness, etc.); test results, schedule. ➢ Testing the 3-inch and 2-inch rods and correlating the 2010 rods on the bridge will take 23 days plus two weeks (best case scenario), which is looking at July 2013 for test results. ➢ If replacing the 2010 bolts, the Chair queried as to when to replace them – before or after bridge opening. ➢ Peer Review Panel member J. Fisher indicated that the bulk of those bolts will not fail in the near-term; the tests will reveal if they will fail in the long-term. He stated that it would be a sensible strategy to replace the 2010 bolts after bridge opening. ➢ In response to the Chair's query regarding replacement bolts, B. Maroney referred to the yellow page section of the reference booklet entitled, "E2 Shear Keys (S3 & S4) and Bearings Connection to E2 Capbeam, Equivalent Substitution, 192 Rod Replacement Alternatives (2010), (To be considered in the event that test results indicate that change of existing rods is advisable)", which showed a matrix of replacement options with pros and cons, and lead time among other information. o <u>3. Other rods on the bridge</u> The Chair indicated that he had received preliminary (QC/QA) information from T. Anziano. He inquired as to whether any testing needed to be done. B. Maroney replied that we do not have solid test data. o Discussion items included: establishing a curve to evaluate locations on the	

	Items	Action
	bridge, list of bolts sheet (whether galvanized or pickled), any other galvanized A354 BD bolts in other toll bridges. o 4. History of rods and design selection 5. Bidders inquiries In response to the Chair's query on the availability of documents for Items 4 and 5, T. Anziano reported that the PS&E package is in hand but have no solid data yet. o 6. Opening the bridge The Chair noted that we have two retrofit strategies; the question was posed as to which option will contribute towards opening the bridge on time. ➢ B. Peterson indicated that no analysis have been made yet. They are now poised to do some study. o The Chair announced that the group will reconvene at a conference call on Tuesday, May 7, at 8:00 AM, on the questions as to whether the 2008 anchor rod issue will be resolved before bridge opening, and should the 2010 anchor rods be replaced after bridge opening, among others.	• Staff to schedule a TBPOC conference call on Tuesday, May 7, 8:00 AM – 9:00 AM.
6.	**OTHER BUSINESS** • N/A	

Adjourned: 4:40 PM

TBPOC MEETING MINUTES
May 1, 2013, 2:00 PM – 5:00 PM

APPROVED BY:

_____ _____
STEVE HEMINGER, TBPOC Chair Date
Executive Director, Bay Area Toll Authority

_____ _____
ANDRE BOUTROS, Date
Executive Director, California Transportation Commission

_____ _____
MALCOLM DOUGHERTY Date
Director, California Department of Transportation

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

RE: Agenda No. - 2a3

Item- Consent Calendar
TBPOC Meeting Minutes
May 7, 2013 Conference Call Minutes

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Program Management Team has reviewed and requests TBPOC approval of the May 7, 2013 Conference Call Minutes.

Attachment(s):
May 7, 2013 Conference Call Minutes

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

CONFERENCE CALL MINUTES

May 7, 2013, 8:00 AM – 9:00 AM

Attendees: TBPOC Members: Steve Heminger (Chair), Malcolm Dougherty, and Andre Boutros
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller
Participants: Michele DiFrancia, John Goodwin, Andrew Gordon, Beatriz Lacson, Rick Land, Peter Lee, Brian Maroney, Dina Noel, Will Shuck, and Ken Terpstra

Convened: 8:06 AM

Items	Action
1. CHAIR'S REPORT ➢ None given.	
4. SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES a. Calendar of Upcoming Events 1) BATA Oversight Committee May 8 Meeting • The Chair indicated that the plan is to have the experts, B. Maroney, M. Wabeh, M. Nader, A. Cavendish-Tribe, to be available after tomorrow's meeting to answer media questions. o T. Anziano will talk to ABF today about having a representative there. o W. Shuck and R. Rentschler will work with the press. • T. Anziano gave a summary of preliminary test results on the 2010 bolts. This will be provided at the meeting with a note that tests are ongoing. 2) TBPOC May 9 Meeting • Leave as scheduled. 3) CA Senate Transportation Committee May 14 Hearing	

Items	Action
• A. Fremier gave a list of participants/attendees for the hearing, which included the TBPOC, B. Maroney and J. Fisher. 4) TBPOC May 15 Workshop • Leave as scheduled. 5) Special BATA Commission May 29 Meeting • Not discussed.	
b. BATA Oversight Committee May 8 Draft Presentation • The Chair suggested going over the pages that each TBPOC member will be presenting, which may need some work and cover other revisions by e-mail, if required. • The Chair tasked the PMT to get a revised presentation out today.	• The PMT to produce a revised presentation this afternoon for TBPOC review /action via e-mail.
c. TBPOC Letter to FHWA • A. Fremier noted that a revised letter was distributed to the members this morning. o Change the letter (page 2) as discussed, and release tomorrow.	• The TBPOC **APPROVED** the FHWA letter with revision on page 2, as discussed, for release tomorrow.
d. Caltrans Draft Report – Metallurgical Analysis of Bay Bridge Broken Anchor Rods S1-G1 and S2-A6 • The Chair indicated that the Congressional staff in Washington, D.C. wants a briefing similar to the one given to the State Senate. o A. Fremier gave a list of participants.	• The TBPOC deferred action until all issues are resolved today.
e. Retrofit Alternative for Shear Keys 1 & 2 • T. Anziano noted that at yesterday's conference call, the consensus of the Peer Review Panel was to go with the saddle option – Alternative C.	

Items	Action
o Per B. Maroney, at 55% design and lacking any risk figures, he would put the cost estimate at $10 million. ➢ M. Dougherty suggested using a range of estimated costs. ➢ The Chair proposed revising slide to show $15 M - $20M for Alternative BD (Option 1 – Steel Collar) and $5 M - $10M for Alternative C (Option 2 – Steel Saddle). A. Fremier indicated that the 1st Quarter report to be released does not acknowledge this expense but the cover letter will. Deadline to submit report to the Legislature is May 14. ➢ Per the Chair, TBPOC action on this is deferred until the May 9 meeting.	• The TBPOC **APPROVED** Alternative C (Option 2 – Steel Saddle) as the retrofit strategy to be used to replace the 2008 anchor bolts. • Put TBPOC action on the First Quarter 2013 report on the May 9 agenda.
5. OTHER BUSINESS a. N/A	

Adjourned: 8:54 AM

TBPOC CONFERENCE CALL MINUTES
May 7, 2013, 8:00 AM – 9:00 AM

APPROVED BY:

_____ _____
STEVE HEMINGER, TBPOC Chair Date
Executive Director, Bay Area Toll Authority

_____ _____
Andre Boutros Date
Executive Director, California Transportation Commission

_____ _____
MALCOLM DOUGHERTY Date
Director, California Department of Transportation

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS | BAY AREA TOLL AUTHORITY | CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

RE: Agenda No. - 2a4

Item- Consent Calendar
TBPOC Meeting Minutes
May 9, 2013 Meeting Minutes

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Program Management Team has reviewed and requests TBPOC approval of the May 9, 2013 Meeting Minutes.

Attachment(s):
May 9, 2013 Meeting Minutes

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

TBPOC MEETING MINUTES

May 9, 2013, 2:00 PM – 4:00 PM
1120 N Street, Sacramento, CA

Attendees: TBPOC Members: Steve Heminger (Chair), Andre Boutros, and Malcolm Dougherty
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller
Participants: Bill Casey, Alan Cavendish-Tribe, Melanie Crotty, Michele DiFrancia, Clive Endress, Andrew Gordon, Ted Hall, Steven Hulsebus, Beatriz Lacson, Richard Land, Peter Lee, Brian Maroney, Dan McElhinney, Dina Noel, Zahra Sadat, Bijan Sartipi, Ken Terpstra, Patrick Treacy, and Brian Wood

Convened: 2:55 PM

Items	Action
1. CHAIR'S REPORT • The Chair acknowledged the extraordinary amount of work by the PMT, consulting and public relations teams, in laying the groundwork to restore public confidence through engineering, candor and transparency; and that we are looking forward to the assistance of the FHWA toward this effort.	
2. CONSENT CALENDAR a. TBPOC Meeting Minutes 1. March 7, 2013 Meeting Minutes 2. March 26, 2013 Conference Call Minutes 3. April 5, 2013 Conference Call Minutes 4. April 9, 2013 Conference Call Minutes 5. April 11, 2013 Conference Call Minutes 6. April 22, 2013 Conference Call Minutes	• The TBPOC **APPROVED** the Consent Calendar, minus Item 2b1 which was removed for discussion.
b. Contract Change Orders (CCOs) 1. SAS CCO 290-S0 (FAVCO Tower Crane Idle Time), $1,146,064 • In response to the Chair's query as to whether the delay was the Department's responsibility, B. Casey indicated that the biggest	• The TBPOC **APPROVED** SAS CCO 290-S0, as presented.

Items	Action
driver involved electrical items, and that the CCO amount reflects a net of the contractor's responsibilities and ours. The PMT concurred. 2. YBITS1 CCO 184-S0 (YBI Tunnel Polyester Concrete Overlay), Not to Exceed $2,300,000 3. OTD2 CCO 601-S2 (Toll Plaza Demolition and Landscaping Preparation), Not to Exceed $1,200,000	
3. PROGRESS REPORTS a. 2013 First Quarter Risk Management Update • P. Treacy presented on the "Risk Management Briefing First Quarter 2013". o The 29th report to the TBPOC reflects a $19 M and two-week improvement over the last quarter. ➢ The report includes the retrofit of the 2008 bolts and some of the 2010 bolts, but does not reflect the delay due to replacement of the 2010 bolts prior to opening; this will be presented in the second quarter report. o Discussion items included: adequacy of reserves, summary of Q1 2013 risk results, SSO corridor schedule risks, top cost and schedule risks, watch list. • 2013 First Quarter Project Progress and Financial Update o A. Fremier requested TBPOC signatures on the cover letter. Deadline date to send the report to the Legislature is May 14, 2013.	• The PMT to revise the cover letter and put a disclaimer that it does not include replacement of the 2010 bolts prior to bridge opening.
4. PROGRAM ISSUES a. Bay Bridge East Span Opening Update 1. Coordination/Encroachment Permit Update • S. Maller indicated that there was nothing to report. Activity for the bridge opening celebration is currently	

	Items	Action
	suspended. o The Chair indicated that the celebration and contributions might have to undergo some retrofitting. b. Gateway Park Update • At M. Dougherty's request, A. Fremier gave an overview/update covering the park concept plan, phasing plan and budget, schedule, with the use of renderings and matrices. o Discussion items included: scope of work, cost categories, funding sources. o The Chair remarked on the $175 million cost, and suggested scaling it down to $100 million. o M. Dougherty noted the incredible vistas that would be a welcome respite for the bike path users. He requested another update in a few months. c. Legislation Update • In response to the Chair's query as to whether AB 755 (Ammiano) – Suicide Barriers - applied to the Bay Bridge, T. Anziano replied that it did not. o Additional due diligence pertaining to police presence, iconic status of the bridge, etc., would be a part of the security group's responsibility. • The Chair pointed out that SB 425 (DeSaulnier) – Expert Review Panels - may be problematic in several respects. Discussion is ongoing. o Discussion items included: compensation for Peer Review work, need for transparency of studies, impact on other projects.	• Staff to scale down the cost and provide another update this year. • Staff to provide a Security Plan update to the TBPOC in June or July.
5.	**SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES** a. Corridor Update/Schedule • The Chair noted that the E2 Retrofit is on the ABF schedule. b. Toll Bridge Rehabilitation Work	

Items	Action
• P. Lee gave an overview of significant toll bridge rehabilitation and State-funded construction work on and around the Bay Bridge, and requested TBPOC approval for CCOs in not-to-exceed amounts for work in YBI and West Spans, Toll Plaza and Toll Plaza Median (Nos. 3, 4, 5, 6 & 9 on the list of Toll Rehabilitation and Other Work Performed under CCO on Seismic Contract or in Corridor, 4/24/2013). o Individual CCO's over $1,000,000 will be presented to the TBPOC for final approval.	• The TBPOC **APPROVED** the pending toll bridge rehabilitation program-funded CCO's in not-to-exceed amounts, as requested.
c. Foundation Inspections Update • Per T. Anziano, this is a standing item on when to release the Toll Bridge Peer Review Panel report dated a month ago. o The TBPOC agreed to get the report out and tasked A. Gordon to determine whether it deserves a press release.	• Staff to release the Toll Bridge Peer Review Panel report on foundation inspections. The PIO to determine whether it warrants a press release.
d. Oakland Touchdown Landscaping • C. Endress gave an update and animations showing a drive-through of the area, showing 20' and 35' palm trees at 50' spacing and 75' spacing. He requested TBPOC approval to plant the palm trees at 75' spacing, per the Architectural Team's recommendation. o Discussion items included: other options, need for billboard companies' approval, tree planting schedule.	• The TBPOC deferred action on this item until billboard company consensus is reached.
e. Plans, Specifications & Estimates (PS&E) for 504/288 Superstructure Demolition • A request for TBPOC approval to send a Department letter to the Metropolitan Transportation Commission (MTC) for approval of this item was presented.	• The TBPOC **APPROVED** sending the Department letter to MTC requesting PS&E approval for the dismantling of the existing San Francisco-Oakland Bay Bridge East Span.

Items	Action
6. OTHER BUSINESS • Status Update on Anchor Rods o The Chair inquired about the need for additional funds over and above the previously approved $4.3 million. o The two 2010 rods removed for testing will be replaced. ➢ The Chair suggested that if Dyson is unable to commit to supplying the replacement rods, to use another supplier and push in that direction.	• The TBPOC **APPROVED** $1 M for a wet test, and opened the expenditure of the $4.3 M to any bolt-related activity; any future requests over this amount are to be submitted in writing.
• TBPOC Chair and Vice Chair Positions o S. Maller suggested the appointment of A. Boutros as Vice Chair of the Committee, the same position formerly occupied by B. Rhinehart.	• The TBPOC to revisit this issue at their next meeting.

Adjourned: 4:05 PM

TBPOC MEETING MINUTES
May 9, 2013, 2:00 PM – 4:00 PM

APPROVED BY:

_____ _____
STEVE HEMINGER, TBPOC Chair Date
Executive Director, Bay Area Toll Authority

_____ _____
ANDRE BOUTROS, Date
Executive Director, California Transportation Commission

_____ _____
MALCOLM DOUGHERTY Date
Director, California Department of Transportation

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

RE: Agenda No. - 2a5

Item- Consent Calendar
TBPOC Meeting Minutes
May 15, 2013 Meeting Minutes

Recommendation:
APPROVAL

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The Program Management Team has reviewed and requests TBPOC approval of the May 15, 2013 Meeting Minutes.

Attachment(s):
May 15, 2013 Meeting Minutes

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

TBPOC MEETING MINUTES
May 15, 2013, 12:00 PM – 2:00 PM
URS Corporation Office, One Montgomery St., Suite 900
San Francisco, CA

Attendees: TBPOC Members: Steve Heminger (Chair), Andre Boutros, and Malcolm Dougherty
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller
Participants: Ade Akinsanya, Bill Casey, Michele DiFrancia, Andrew Gordon, Ted Hall, Beatriz Lacson, Richard Land, Peter Lee, Steve Margaris, Brian Maroney, Dina Noel, Jim Rucker, Bijan Sartipi, and Ken Terpstra
Guests: TY Lin/M&N: Sajid Abbas, James Duxbury, Dennis Jang, Marwan Nader, Jim Rucker; ABF: Brian Petersen; AVS/METS: Mazen Wahbeh

Convened: 12:09 PM

	Items	Action
1.	**CHAIR'S REPORT** • None given.	
3.	**SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES** a. Status Update on Anchor Rods 1. What caused the 2008 bolts to fail? 2. What retrofit strategy should we use for 2008 bolts? 3. Should the remaining bolts on the east pier be replaced? 4. What should be done about other similar bolts? • The Chair noted that while he has received a lot of materials on this matter, he still does not have the minutes of the earliest design meetings from the late 1990s/ early 2000s. o 1. What caused the 2008 bolts to fail? The Chair referred to T. Anziano's document (Background on E2-T1 and SAS A354BD Anchor Rods) and commented that he was struck by the	• S. Margaris and J. Rucker to provide all pertinent meeting minutes to the TBPOC.

Items	Action
disparity between the 1995 Caltrans Bridge Design Specifications (BDS), which do not restrict galvanization of A354BD rods, and the 2000 BDS which do. ➢ Per M. Nader, the 1998 design was tied to the 1995 BDS. As a matter of consistency of code, galvanized A354 BD rods were used. He referred to binders of calculations, demands, etc., and described the process of bolt selection, the challenges involved, and concluded that it was testing that failed – not the bolts. ➢ J. Rucker presented a brief timeline of events from January 1999 to date. o Discussion items included: ASTM standards, sole sourcing, group decision to galvanize the A354 BDs, choice between one galvanizing process and another (mechanical galvanization vs. hot dip galvanization), blasting vs. pickling, comparison with Richmond-San Rafael Bridge, corrosion protection. o A. Fremier handed out a page from the Golden Gate Bridge contract which showed the use of A354 BD anchor bolts, both mechanically galvanized and not galvanized, on different parts of the bridge. o S. Margaris handed out copies of a memo from J. Rucker on Draft-E2/T1 Addendum No. 3 Request (A354 bolt galvanizing), and minutes of 3/27/2013 meeting on A354 & A490 bolt corrosion protection (SFOBB), from A. Chow. o <u>2. What retrofit strategy should we use for 2008 bolts?</u> In response to the Chair's question as to when sufficient knowledge might be acquired to come up with a schedule regarding Labor Day bridge opening, B. Petersen gave an update of current activities, and indicated that ABF could not commit to a date until the saddle	• ABF to give the TBPOC a schedule update at the end of May.

Items	Action
fabrication is locked down. o 3. Should the remaining bolts on the east pier be replaced? o 4. What should be done about other similar bolts? The Chair referred to his e-mail to the TBPOC and PMT, dated May 13, 2013, on Bolt Workshop #3, which had his comments on the above questions. In response to the Chair's query as to whether any additional testing data from the lab on the downstairs bolts have been received, M. Wahbeh distributed a handout showing updated testing results for 2008 A354 Gr. BD Anchor Rods (96 Rods) and 2010 A354 Gr. BD Anchor Rods (192), Charpy Sample SEM Fracture Comparison, and E2 Shear Key Hardness Readings – 192 Rods (Fabricated in 2010). He referred to pages 3-5 which showed the mechanical testing results for all four full-size sample rods (2010), and pointed to the comparison between the 2008 and 2010 charpy fracture surface samples on page 6.	
o Discussion items included: testing of upstairs bolts; range of tests; expanding testing resources; surface hardness test on other bolts; test on tower foundation anchor bolts; availability of a comprehensive testing plan.	• B. Maroney to provide a testing plan in a week's time.
o M. Nader indicated that by the end of July when testing will be completed, more data will be available and more work can be done. o The Chair expressed frustration in not having more information. He assured the team that if additional resources and direction are needed, the TBPOC will provide them.	
o The Chair referred to the chart, attached to his 5/13/2013 e-mail, which he drafted to sort out the bolts. He described each column (Location,	• Move #7 (Main cable anchor bolts) on the chart from the Reduce Tension column to the Monitor column.

Items	Action
Replace Before Opening, Replace After Opening, Reduce Tension, and Monitor), and remarked about making some decisions about these prior to the Townsend test, or wait until July. o B. Casey handed out, for TBPOC information, a spreadsheet on E2 Shear Key S1/S2 and Anchor Rod CCO Tracking Status, as of 5/15/2013, with rough order of magnitude figures for field work and fabrication, excluding testing activity. ➢ The spreadsheet was developed to track the expenditure of the TBPOC-approved amounts of $4.3 M and $1 M for all E2 shear key anchor bolt activity and the wet test of 2010 bolts, respectively. • The Chair acknowledged the amount of work and strain that people are under, and expressed the Committee's appreciation for all the work being done under pressure and criticism. He noted that every passing day makes Labor Day opening harder to achieve; that we do want to complete this job, but we need to do it well and do it right. He thanked the teams for their efforts, and indicated that the group will meet again at the end of the month. b. Draft Bolt Report • Not discussed.	
6. OTHER BUSINESS • N/A	

Adjourned: 1:38 PM

TBPOC MEETING MINUTES
May 15, 2013, 12:00 PM – 2:00 PM

APPROVED BY:

_____ _____
STEVE HEMINGER, TBPOC Chair Date
Executive Director, Bay Area Toll Authority

_____ _____
ANDRE BOUTROS, Date
Executive Director, California Transportation Commission

_____ _____
MALCOLM DOUGHERTY Date
Director, California Department of Transportation

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b1

Item- Consent Calendar – Contract Change Orders (CCOs)

Proposed CCO 601-S0, Yerba Buena Island Transition Structures (YBITS) No. 2, W4 Substation Upgrades

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Recommendation:
APPROVAL

Cost:
Not to Exceed $ 1,500,000.00 (BATA Toll Rehabilitation Funds)

Schedule Impacts:
N/A

Discussion:
CCO 601-S0 in the **not-to-exceed amount of $1,500,000.00** will provide for upgrades to the W4 substation addressing the following:

- Outdated switchgear, low voltage control center, cabinet & battery equipment
- Signs of arcing across switchgear insulators
- Moisture, corrosion, and rodent infestation
- Inoperable heaters

The W4 substation is one of seven substations feeding the SFOBB corridor from Sterling Street, at the western approach, to the Toll Plaza, at the eastern approach. Five of the seven substations have been constructed within the last 5 years with a sixth substation at Sterling Street currently being upgraded under a separate contract. Expediting the upgrades to the W4 substation eliminates the risk of leaving the corridor without redundancy in the event the W4 substation fails prior to its upgrade. In addition of providing a reliable power source for the corridor, it provides the power supporting the new BASE system.

District 4 Maintenance recommends performing the work under the YBITS#2 contract to also minimize the potential of schedule delays by avoiding the bird

nesting season. It is anticipated the work would begin in October of 2013, if performed under CCO, and be completed by mid-February of the 2014.

Risk Management:

Funding for the W4 Substation modifications will be provided by the Bay Area Toll Authority under their Toll Bridge Rehabilitation Program separate from the Toll Bridge Seismic Retrofit Program. As such, no risk management discussion is required.

Attachment(s):

Draft CCO No. 601-S0 & CCO Memo

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 601	Suppl. No. 0	Contract No. 04 - 0120T4	Road 04-SF-80-12.6/13.9	FED. AID LOC.: NO FED AID

To: **CALIFORNIA ENGINEERING CONTRACTORS INC./SILVERADO**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

Perform any additional work not already included in the scope for the Agreed Price as directed by the Engineer. This work will be paid for as Extra Work as provided in Section 5-1.10, "Force Account Payment", of the Special Provisions, and Section 4-1.03D, "Extra Work", of the Standard Specifications.

Estimated cost of Extra Work at Force Account = $100,000.00

Extra Work at Lump Sum:

Provide all labor, material, tools, equipment and incidentals to perform all work required as shown on the attached drawings: (Sheets x through y of this change order).

Work includes, but is not limited to:

Removal and replacement of existing Switch Gears, Low Voltage Control Centers (LVCC), Navigation Control Cabinets, Batteries & Shelvings and all of the supporting conduits and wiring at W4 substation; work includes constructing all concrete equipment pads with bar reinforcing and anchor bolts as shown on the drawings for the LVCC and Switch Gear units; installation of all required conductors, conduits and supports; and startup and testing of all equipment.

For this work, the Contractor shall be paid an Agreed Lump Sum of $1,400,000.00. This agreed amount includes all labor, material, tools, equipment and incidentals as required, and constitutes full payment, including all markups, for this change.

Contractor has to provide submittals for all of the electrical equipment shown on the plans and for any lifting device, which needs to be attached to the existing structure and is necessary for the removal and installation of all the new equipment for the Engineer's approval before ordering, procurement and installation. The submittal for the lifting device should contain al structural details, drawings and calculations for the device and attachment points and be stamped by a California Registered Engineer.

The Agreed Lump Sum price does not include lane closures or traffic control, which will be paid under a separate change order.

The Agreed Lump Sum price excludes the cost of any Storm Water Pollution Prevention Plan (SWPPP) measures, such as SWPPP amendments and reports, and appropriate Best Management Practices (BMPs), which will be paid for under a separate change order.

Extra Work at Agreed Lump Sum = $1,400,000.00

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 601	Suppl. No. 0	Contract No. 04 - 0120T4	Road 04-SF-80-12.6/13.9	FED. AID LOC.: NO FED AID

Estimated Cost: Increase ☑ Decrease ☐ **$1,500,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer BILL HOWE	Date

Approval Recommended by

Signature	Region Construction Division Chief Tony Anziano	Date

Engineer Approval by

Signature	Region Construction Division Chief Tony Anziano	Date

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DRAFT

CONTRACT CHANGE ORDER MEMORANDUM

TO: DEANNA VILCHECK / BILL HOWE	FILE: **E.A.** 04 - 0120T4
FROM: BILL HOWE	**CO-RTE-PM** 04-SF-80-12.6/13.9
	FED. NO. NO FED AID
CCO#: **601** SUPPLEMENT#: **0** Category Code: **CBPC**	CONTINGENCY BALANCE (incl. this change) **$7,837,544.00**
COST: **$1,500,000.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: rem./replacemt.var.elec.equip.W4 substa.	**PROJECT DESCRIPTION:** CONSTRUCT BRIDGE, ROADWAYS, ELECTRICAL, BUILDINGS AND R

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
317 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**0**

THIS CHANGE ORDER PROVIDES FOR:

Removal and replacement of existing Switch Gears, Low Voltage Control Centers (LVCC), Navigation Control Cabinets, Batteries & Shelvings and all of the supporting conduits and wiring at W4 substation; work includes constructing all concrete equipment pads with bar reinforcing and anchor bolts as shown on the drawings for the LVCC and, Switch Gear units; installation of all required conductors, conduits and supports; and startup and testing of all equipment.

The following adverse conditions have been observed at the W4 Substation, which necessitate its upgrade:

- Outdated switchgear, low voltage control center, cabinet & battery equipment.
- Signs of arcing across switchgear insulators.
- Moisture, corrosion & rodent infestation.
- Inoperable heaters.

W4 is one of seven substations feeding the SFOBB corridor from Sterling Street at the western approach to the Toll Plaza at the eastern approach. Five of the seven substations have been constructed within the last 5 years with a sixth substation at Sterling Street currently being upgraded under a separate contract. Upon completion of the Sterling upgrades, the W4 Substation will be the only remaining antiquated substation of the seven within the SFOBB corridor. In the event the W4 substation fails prior to its upgrade, the corridor would be left without redundancy. It is proposed to expedite the W4 upgrades by performing the work under the existing YBITS2 contract by CCO.

Performing the work by CCO under YBITS2 would provide the following benefits:

- Anticipated start of work under CCO (October 2013) and completion (February 15, 2014) would coincide with the bird nesting work window.
- Reliable power redundancy for the corridor. In the event the W4 substation fails prior to its upgrade, the corridor would be left without redundancy. It is important to have reliable and redundant power in place to support the new BASE system as soon as possible.
- Existing temporary hoisting equipment installed for the recently performed W4 transformer replacement can be employed in this work as a cost savings.

District 4 Maintenance has recommended doing this work by CCO for the above reasons via email / memo from Ramses Sargiss on April 15, 2013.

It is anticipated the work would begin in October of 2013, and be completed by mid-February of 2014; therefore, there is no impact to the contract completion schedule.

CONTRACT CHANGE ORDER MEMORANDUM

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Bob Zandipour, Design	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):		Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:		Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$100,000.00	$100,000.00
AGREED PRICE	$1,400,000.00	$1,400,000.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$1,500,000.00	$1,500,000.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE

☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)

☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

SFOBB MEP Integration Strategy (CONFIDENTIAL) 6-6-2013

	Segregation of Work	Approved Budget Nov 2008	Approved Budget Sep 2012	Executed CCOs / Projections	Comments
A	**Furnish Light Poles (BATA Contract)**				
Item A-1	Furnish Light Poles	$15,300,000.00	$5,888,909.00	$2,888,909.00	This is the Original Contract Amount for poles
Item A-2	Storage Cost	$1,500,000.00	$200,000.00	$150,000.00	Storage
	Change Order			$2,500,000.00	Change Orders
	Total Estimated Cost To Furnish Light Poles (BATA Contract)	**$16,800,000.00**	**$6,088,909.00**	**$5,538,909.00**	The fixtures were eliminated from this contract and added to Item 1B below.
B	**MEP Integration Work Installation**				
Item B-1	Install Light Poles (Skyway and OTD1), F&I LED fixture for corridor poles	$2,000,000.00	$13,500,000.00	$13,466,929.00	Fixtures were eliminated from pole contract and added to this item.
Item B-2	Installation of MEP items eliminated from Skyway & OTD1	$8,000,000.00	$8,000,000.00	$9,000,000.00	CCO 110, 903, 907, 908, 912, 913, 914, 915, 916, 801, 802,
Item B-3	Upgrades & Revisions of the already installed components (Skyway & OTD1)	$2,500,000.00	$2,500,000.00	$1,600,000.00	CCO 163
Item B-4	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	$2,000,000.00	$0.00		This work is included in Item D below
Item B-5	Contingency (20%), changed to 15% in January 2012	$2,900,000.00	$3,600,000.00	$3,610,039.35	
	Total Estimated Cost For Installation	**$17,400,000.00**	**$27,600,000.00**	**$27,676,968.35**	
Total for all Light Poles & MEP Integration Work (within Skyway & OTD1)		**$34,200,000.00**	**$33,688,909.00**	**$33,215,877.35**	Total of $34.2M for Items A & B was approved by TBPOC 11-6-2008
C	**System Wide Testing (Entire Corridor)**				
Item C-1	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	$3,000,000.00	$3,000,000.00	$2,500,000.00	CCO 905 & CCO 906
Item C-2	Resolution of system wide testing issues (for entire corridor)	$1,500,000.00	$1,500,000.00	$1,000,000.00	
Item C-3	Contingency (20%)	$900,000.00	$900,000.00	$700,000.00	
	Total Estimated Cost Of System wide Testing	**$5,400,000.00**	**$5,400,000.00**	**$4,200,000.00**	$5.4M (TBPOC May 6, 2010)
D	**Complete BASE System (Entire Corridor)**	**March 2010**	**Sep 2012**		
Item D-1	Hardware (Cameras, interface box and decoder for each camera / wiring)	$3,000,000.00	$3,000,000.00	$7,000,000.00	CCOs 901-S2, 150-S1
Item D-2	Installation cost (Camera & Hardware)	$1,500,000.00	$3,500,000.00		
Item D-3	New dedicated fiber line in both structures with 2 loops	$2,000,000.00	$2,000,000.00	$1,200,000.00	CCO's 901 & 901S1 on YBI and CCO 150 on SAS
Item D-4	Added wireless dish & supporting Equipment @ YBI-1, Licensed Frequency	N/A	$1,200,000.00	$1,200,000.00	CCO 904 (YBI-1 Project)
Item D-5	Network, Video Management & Monitoring (Hardware, Software, Server & Monitoring Rooms	N/A	$3,000,000.00	$2,500,000.00	CCOs 803, 911
Item D-6	Furnish & Install BASE cameras at YBI	N/A	$1,000,000.00	$1,500,000.00	
Item D-7	Pier Top Cameras, Motion Sensors & Camera wash units (F&I 48 of each)	N/A	$8,167,000.00	$7,000,000.00	
Item D-8	Contingency (20%)	$1,300,000.00	$4,373,400.00	$4,080,000.00	
	Total Estimated Cost for BASE System	**$7,800,000.00**	**$26,240,400.00**	**$24,480,000.00**	
	Total for all above items (Including BATA Contract)	**$47,400,000.00**	**$65,329,309.00**	**$61,895,877.35**	

	MEP Rehab Projects			Cost	
	Tunnel Lighting & Portal Lighting			$6,200,000.00	CCOs 159, 159-S1 & 910
	W4 substation transformer & W4 rehab			$1,900,000.00	CCOs 909 & 601
	Total MEP Rehab Projects			$8,100,000.00	

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b2

Item- Consent Calendar – Contract Change Orders (CCOs)
SAS Contract CCO 150-S1 –
Install State-Furnished CCTV Security Cameras & Furnish & Install Supporting Conduits, Wiring & Equipment

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Recommendation:
APPROVAL

Cost:

CCO 150-S0	$	182,760.00	Issued 7/29/2012
CCO 150-S1	$	1,400,000.00	Not to Exceed

Schedule Impacts:
N/A

Discussion:

CCO 150-S1 in the not to exceed amount of $1,400,000.00 will provide for the installation of 33 cameras necessary for the opening of the SAS bridge on the tower, light poles, and service platforms, as well as motion sensors and control boxes for the Bay Area Security Enhancement (BASE) system on the SAS structure including furnishing and installing all necessary conduits, wiring and other supporting elements for this work.

CCO 150-S0 at a cost of $182,760.00 provided for the installation of the backbone fiber optic cable systems on the SAS structures in preparation of the cameras' installation.

The total cost of this CCO, along with the multiple BASE CCOs being implemented on the YBITS1 and YBITS2 contracts, fall within the established SFOBB East Span BASE budget of $26,240,000.00 approved by TBPOC on September 2012.

Funding for this work comes from the Bay Area Toll Authority's (BATA) Toll Bridge Rehabilitation Program, and has been approved by BATA.

Risk Management:
Funding for the SFOBB corridor BASE System is provided by the Bay Area Toll Authority outside of the Toll Bridge Seismic Retrofit Program (TBSRP). Therefore, this item is not included in the TBSRP Risk Management Plan.

Attachment(s):
1. Draft CCO: 150-S1
2. Approved CCO & CCO Memo 150-S0

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 150 Suppl. No. 1 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate be ice and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment i idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity i

DRAFT

Extra Work at Lump Sum:

Install Bay Area Security Enhancement (BASE) cameras, motion sensors, and all of the supporting components.

A list of materials that will be State furnished is provided in Attachment A on pages 3 through 8 and will be furnished in accordance with Special Provisions Section 8-1.03 “State-Furnished Materials.” State furnished material shall be delivered to Pier 7 in Oakland by a delivery date of January 14, 2013. All other materials shown in the change order plan sheets, and not listed in Attachment A, will be furnished by the Contractor.

Paint application on any areas of damaged existing paint shall be performed in accordance with Special Provisions Section 10-1.69 “CLEAN AND PAINT STRUCTURAL STEEL.”

The following revised plan sheets detail the changes addressed in this change order: 75S2, 86S34, 86S35, 86S36, 93S1, 94S5, 350S1, 350S2, 350S3, 350S4, 350S5, 350S6, 350S7, 350S8, 350S9, 350S10, 350S11, 350S12, 350S13, 350S14, 350S15, 350S16, 350S17, 350S18, 350S19, 350S20, 350S21, 350S23, 350S24, 350S25, 350S26, 350S27, 350S28, 350S29, 350S30, 350S31, 350S32, 350S33, 350S34, 350S35, 350S36, 350S37, 350S39, 350S40, 350S41, 350S42, 350S43, 350S44, 350S45, 350S46, 350S47, 350S48, 350S49, 350S50, 350S51, 350S52, 350S53, 350S54, 350S55, 350S56, 350S57, 350S58, 350S59, 350S60, 350S61, 350S62, 350S63, 350S64, 350S65, 350S66, 350S67, 350S68, 350S69, 350S70, 350S71, 350S72, 350S73, and 350S74 (of 1204) as shown on sheets 9 through 86 of this change order.

This change order resolves the costs associated with Contractor Request for Information (RFI) numbers 3160 and 3177R1 with respect to changes listed above.

For this work, the Contractor will receive a lump sum price of $TBD.00. This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals, including all markups by reason of this change.

Extra Work at Lump Sum…….....…….$1,300,000.00 (Not to Exceed)

Because the majority of the components of this change order are furnished by the Department, the Contractor is not responsible for testing power and/or functionality of the system as a whole, or any individual component furnished by the Department. The Department may choose to do their own testing of the system after installation. Any additional extra work for system functionality, resulting from testing performed by the Department, will be addressed in a separate change order.

The performance of this work shall be conditioned on access being available through the temporary elevator and should either through late delivery or impacts resulting from the design cause the completion of work to be impacted from not having access, additional costs from these impacts will be under a separate Contract Change Order (CCO).

CONTRACT CHANGE ORDER Change Requested by: Engineer

CCO: 150 Suppl. No. 1 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

The work referenced in this Contract Change Order (CCO) below elevation 53 M is not required for Seismic Safety Opening (SSO). Work in this CCO shall not affect the incentive provisions of CCO 160. Should effects resulting from the performance of this work, after achieving readiness for SSO and opening to public traffic, have an impact on the work performed additional warranted compensation will be provided in accordance with Standard Specifications Section 4-1.03, "Changes," under a separate CCO.

EXTRA WORK AT FORCE ACCOUNT

Perform any minor additional work not already included in the scope for the agreed price as directed by the Engineer. This work will be paid for as extra work as provided in Section 5-1.17 "Force Account Payment" of the Special Provisions, and Section 4-1.03D of the Standard Specifications.

Estimated cost of Extra Work at Force Account…….$100,000.00

Estimated Cost: Increase ☒ **Decrease** ☐ **$1,400,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature **Resident Engineer** Darryl Schram, Senior T.E. **Date**

Approval Recommended by

Signature **Supervising Transportation Engineer** William Casey, Supervising T.E. **Date**

Engineer Approval by

Signature **Supervising Transportation Engineer** William Casey, Supervising T.E. **Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature (Print name and title) **Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: May 22, 2013

TO: Tony Anziano, Program Manager

FROM: Darryl Schram, Senior T.E.

FILE: **04-0120F4**

04-SF-80-13.2, 13.9

FEDERAL NUMBER

CCO NO.	SUPPLEMENT NO.	CATEGORY CODE
150	1	

CONTINGENCY BALANCE (including this change)

$1,400,000.00 INCREASE ☒ DECREASE ☐

HEADQUARTERS APPROVAL REQUIRED? YES ☒ NO ☐

SUPPLEMENTAL FUNDS PROVIDED: $ 0.00

IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES ☒ NO ☐

CCO Description: BASE Camera Installation

DRAFT

THIS CHANGE ORDER PROVIDES FOR:

Installing Bay Area Security Enhancement (BASE) cameras, motion sensors, and all of the supporting components.

The events of September 11, 2001, have caused the Department and California Highway Patrol (CHP) to reevaluate security measures on bridges. Enhanced security will be added on all Bay Area toll bridges under the program "Bay Area Security Enhancement" (BASE). Contract Change Order (CCO) 150 S0 "BASE Integration" furnished and installed two exclusive fiber trunk lines for Homeland Security cameras. This change order will install BASE cameras with all the associated electronic and motion sensors, which will be furnished under a separate contract.

The total cost of this change order is $1,400,000.00, which can be financed from the contingency fund. The cumulative total of CCO 150 S0 and CCO 150 S1 is $1,582,760.00. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order will obtain concurrence from William Casey (Supervising TE), Tony Anziano (Program Manager), Rich Foley (HQ Oversight), Lina Ellis (Maintenance), and Jing Chen (District Design).

CONCURRED BY:

	DATE
STRUCTURE REPRESENTATIVE	
SR. BRIDGE ENGINEER	
FHWA REPRESENTATIVE	
PROJECT ENGINEER Ken Terpstra	
OTHER (SPECIFIY)	
DISTRICT PRIOR APPROVAL BY	
HQ (ISSUE & APPROVE) (TO PROCEED) BY	
RESIDENT ENGINEER SIGNATURE	

This Section updated by CADb

ESTIMATE OF COST

ITEMS	THIS REQUEST	TOTAL TO DATE
	$0.00	$0.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☒ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)

☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

HC-39 Word(Rev.9/96)

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 150 **Suppl. No. 0** **Contract No. 04 – 0120F4** **Road** SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Lump Sum:

Furnish and install two exclusive fiber trunk (72 fiber) lines for Homeland Security cameras. There is one trunk line in each bridge structure (EB & WB) with loops at each end to provide redundancy for the system.

The following revised and supplemental plan sheets detail the changes addressed in this change order: 96R1, 99R2, 103R3, 103S2R2, 103S5R2, 136R2, 139S6, 149R4, 150R1, 151R1, 152R2, 153R2, 154R4, 155R2, 166S2R1, 168R4, 178R3, 178S1R1, 187R2, 217R2, 218R3, 219R2, 220R3, 221R2, 243R2, 356R1, 357S1R2, 357S2R2, 363R5, 363S1R1, 364R4, 375R5, 376R4, 405R1, 406R1, 407S6R3, 407S9R4, 407S13R1, 407S15R1, 407a11S01, and 407a11S02 (of 1204) as shown on sheets 2 through 42 of this change order.

For this work, the Contractor will receive a lump sum price of $182,760.00. This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals including all markups by reason of this change.

Extra Work at Lump Sum.....$182,760.00

Estimated Cost: **Increase** ☒ **Decrease** ☐ **$182,760.00**

By reason of this order the time of completion will be adjusted as follows: **0 Days**

Submitted by

Signature	**Resident Engineer** Kannu Balan, Senior T.E.	**Date** 7-21-11

Approval Recommended by

Signature	**Senior Transportation Engineer** William Shedd, Senior T.E.	**Date** 7-26-11

Engineer Approval by

Signature	**Principal Transportation Engineer** for SIEGENTHALER Peter Siegenthaler, Prin. T.E.	**Date** 29 JULY 2011

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title) BRIAN A PETERSEN - PROJECT DIRECTOR	**Date** 28JUL11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 7/21/2011 Page 1 of 1

TO: Pete Siegenthaler, Prin TE /	FILE: **E.A.** 04 - 0120F4
FROM: Kannu Balan, Senior TE	**CO-RTE-PM** SF-80-13.2/13.9
	FED. NO.
CCO#: **150** SUPPLEMENT#: **0** Category Code: **CBPC**	CONTINGENCY BALANCE (incl. this change) **$167,171,888.11**
COST: **$182,760.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☐ YES ☑ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: BASE Integration	**PROJECT DESCRIPTION:** CONSTRUCT SELF-ANCHORED SUSPENSION BRIDGE

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
2490 Day(s)	**0** Day(s)	**501** Day(s)	**20** %	**2**

THIS CHANGE ORDER PROVIDES FOR:

Furnishing and installing two exclusive fiber trunk (72 fiber) lines for Homeland Security cameras. There is one trunk line in each bridge structure (EB & WB) with loops at each end to provide redundancy for the system.

The design of the new SFOBB east span was completed prior to September 11, 2001, therefore no provisions for extensive security were included in the original design. The CHP has required the Department to enhance security on all Bay Area Toll Bridges under the program "Bay Area Security Enhancement" (BASE). This change order implements the requirements of CHP for installation of security cameras and the needed infrastructure throughout the new SFOBB east span.

The total cost of this change order is $182,760.00, which can be financed from the contingency fund. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order has concurrence from Peter Siegenthaler (Principal TE), Rich Foley (HQ Oversight), Ken Terpstra (Project Manager), Rick Morrow (Supervising BE), Wenyi Long (Design Oversight), Lina Ellis (Maintenance), and Jing Chen (District Design) May 12, 2011.

CONCURRED BY:			
Construction Engineer:	PCE, Pete Siegenthaler, Prin TE	Date	9/28/10
Bridge Engineer:	Rick Morrow, Sup BE	Date	11/3/10
Project Engineer:	CT Oversight, Wenyi Long, P.E.	Date	12/9/10
Project Manager:	Proj Manager, Ken Terpstra	Date	12/9/10
FHWA Rep.:		Date	
Environmental:		Date	
Other (specify):	HQ, Rich Foley	Date	9/30/10
Other (specify):	Struct. Maint, Lina Ellis	Date	12/9/10
District Prior Approval By:		Date	
HQ (Issue Approve) By:		Date	
Resident Engineer's Signature:	Kannu Balan	Date	7-21-11

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$182,760.00	$182,760.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$182,760.00	$182,760.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE PERCENT

SFOBB MEP Integration Strategy (CONFIDENTIAL) 6-6-2013

	Segregation of Work	Approved Budget Nov 2008	Approved Budget Sep 2012	Executed CCOs / Projections	Comments
A	**Furnish Light Poles (BATA Contract)**				
Item A-1	Furnish Light Poles	$15,300,000.00	$5,888,909.00	$2,888,909.00	This is the Original Contract Amount for poles
Item A-2	Storage Cost	$1,500,000.00	$200,000.00	$150,000.00	Storage
	Change Order			$2,500,000.00	Change Orders
	Total Estimated Cost To Furnish Light Poles (BATA Contract)	**$16,800,000.00**	**$6,088,909.00**	**$5,538,909.00**	The fixtures were eliminated from this contract and added to Item 1B below.
B	**MEP Integration Work Installation**				
Item B-1	Install Light Poles (Skyway and OTD1), F&I LED fixture for corridor poles	$2,000,000.00	$13,500,000.00	$13,466,929.00	Fixtures were eliminated from pole contract and added to this item.
Item B-2	Installation of MEP items eliminated from Skyway & OTD1	$8,000,000.00	$8,000,000.00	$9,000,000.00	CCO 110, 903, 907, 908, 912, 913, 914, 915, 916, 801, 802,
Item B-3	Upgrades & Revisions of the already installed components (Skyway & OTD1)	$2,500,000.00	$2,500,000.00	$1,600,000.00	CCO 163
Item B-4	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	$2,000,000.00	$0.00		This work is included in Item D below
Item B-5	Contingency (20%), changed to 15% in January 2012	$2,900,000.00	$3,600,000.00	$3,610,039.35	
	Total Estimated Cost For Installation	**$17,400,000.00**	**$27,600,000.00**	**$27,676,968.35**	
Total for all Light Poles & MEP Integration Work (within Skyway & OTD1)		**$34,200,000.00**	**$33,688,909.00**	**$33,215,877.35**	Total of $34.2M for Items A & B was approved by TBPOC 11-6-2008
C	**System Wide Testing (Entire Corridor)**				
Item C-1	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	$3,000,000.00	$3,000,000.00	$2,500,000.00	CCO 905 & CCO 906
Item C-2	Resolution of system wide testing issues (for entire corridor)	$1,500,000.00	$1,500,000.00	$1,000,000.00	
Item C-3	Contingency (20%)	$900,000.00	$900,000.00	$700,000.00	
	Total Estimated Cost Of System wide Testing	**$5,400,000.00**	**$5,400,000.00**	**$4,200,000.00**	$5.4M (TBPOC May 6, 2010)
D	**Complete BASE System (Entire Corridor)**	**March 2010**	**Sep 2012**		
Item D-1	Hardware (Cameras, interface box and decoder for each camera / wiring)	$3,000,000.00	$3,000,000.00	$7,000,000.00	CCOs 901-S2, 150-S1
Item D-2	Installation cost (Camera & Hardware)	$1,500,000.00	$3,500,000.00		
Item D-3	New dedicated fiber line in both structures with 2 loops	$2,000,000.00	$2,000,000.00	$1,200,000.00	CCO's 901 & 901S1 on YBI and CCO 150 on SAS
Item D-4	Added wireless dish & supporting Equipment @ YBI-1, Licensed Frequency	N/A	$1,200,000.00	$1,200,000.00	CCO 904 (YBI-1 Project)
Item D-5	Network, Video Management & Monitoring (Hardware, Software, Server & Monitoring Rooms	N/A	$3,000,000.00	$2,500,000.00	CCOs 803, 911
Item D-6	Furnish & Install BASE cameras at YBI	N/A	$1,000,000.00	$1,500,000.00	
Item D-7	Pier Top Cameras, Motion Sensors & Camera wash units (F&I 48 of each)	N/A	$8,167,000.00	$7,000,000.00	
Item D-8	Contingency (20%)	$1,300,000.00	$4,373,400.00	$4,080,000.00	
	Total Estimated Cost for BASE System	**$7,800,000.00**	**$26,240,400.00**	**$24,480,000.00**	
	Total for all above items (Including BATA Contract)	**$47,400,000.00**	**$65,329,309.00**	**$61,895,877.35**	

	MEP Rehab Projects			Cost	
	Tunnel Lighting & Portal Lighting			$6,200,000.00	CCOs 159, 159-S1 & 910
	W4 substation transformer & W4 rehab			$1,900,000.00	CCOs 909 & 601
	Total MEP Rehab Projects			$8,100,000.00	

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b3

Item- Consent Calendar – Contract Change Orders (CCOs)

Yerba Buena Island Transition Structures (YBITS) No. 1 CCO 159-S1 – YBI Tunnel Upper Deck LED Lighting

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Recommendation:
APPROVAL

Cost:

CCO 159-S0	$4,624,200.00 – Approved Jan. 3, 2013 - BATA Rehab Funds
CCO 159-S1	$1,346,090.00 BATA Rehab Funds

Schedule Impacts:
N/A

Discussion:
CCO 159-S1 in the amount of $1,346,090.00 is the final negotiated price for substituting the metal halide fixtures, specified under CCO 159-S1 for the YBI Tunnel lighting replacement, for LED fixtures. In April of 2013, the TBPOC had approved the "Not to Exceed" amount of $1,350,000.00.

CCO 159-S0 called for 922 EA lighting fixtures to be replaced in the upper and lower decks of the YBI Tunnel. Of the 922 fixtures 460 were specified as metal halide fixtures and 462 as LED fixtures. The placement of the metal halide fixtures, with the majority of them planned for the tunnel's upper deck, was a needed interim improvement while the specifications for the LED fixtures were developed. The specifications package was completed in April eliminating the need for the temporary improvement.

Risk Management:
Funding for the YBI tunnel lighting is provided by the Bay Area Toll Authority under their Toll Bridge Rehabilitation Program separate from the Toll Bridge Seismic Retrofit Program. As such, no risk management discussion is required.

Attachment(s):

1. Approved CCO No. 159-S1 - CCO & Memo
2. Approved CCO No. 159-S0 - CCO & Memo

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 159	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

1) Provide traffic control as necessary for performing the work of this change order as determined by the Engineer.

2) Perform corrective work on existing facilities due to unanticipated field conditions or conflicts with existing components pertaining to the installation of the YBI tunnel lighting as determined necessary by the Engineer.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with provisions of Section 4-1.03D, "Extra Work", of the Standard Specifications and Section 5-1.17, "Force Account Payment", of the Contract Special Provisions.

Estimate of Extra Work at Force Account = $100,000.00

Extra Work at Lump Sum:

Substitute 98 watt LED luminaires for all the 400 watt Metal Halide luminaires that were specified to be installed under Contract Change Order No.159, Supplement No. 0. This substitution includes 446 each luminaires in the upper deck (westbound) tunnel and 14 each luminaires in the lower deck (eastbound) tunnel.

All LED luminaires to be furnished and installed shall comply with the specifications incorporated into Contract Change Order No. 159, Supplement No. 0, for LED lighting and as approved by the Engineer.

For this work, the Contractor shall be compensated an Agreed Lump Sum of $1,246,090.00, which constitutes full compensation, including all markups, complete in place for this change.

Any corrective work required on existing facilities due to unanticipated field conditions or conflicts with existing components pertaining to the installation of the new luminaires and hardware shall be paid as Extra Work at Force Account as specified herein.

Extra Work at Agreed Lump Sum = $1,246,090.00

All materials furnished for this change order shall be approved by the Engineer prior to the purchase order being placed.

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 159	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Estimated Cost: Increase ☑ Decrease ☐ **$1,346,090.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by		
Signature William Howe	**Resident Engineer** William Howe, Senior R.E.	**Date** 05-08-13
Approval Recommended by		
Signature Tony Anziano	**Region Construction Division Chief** Tony Anziano	**Date** 5-9-13
Engineer Approval by		
Signature	**Region Construction Division Chief** Tony Anziano	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by		
Signature	**(Print name and title)** Edmund A. Puchi - Treasurer	**Date** 5-15-2013

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM	FILE: **E.A.** 04 - 0120S4
FROM: William Howe, Senior R.E.	**CO-RTE-PM** SF-80-12.7/13.2
	FED. NO. NO FED AID
CCO#: **159** SUPPLEMENT#: **1** Category Code: **CBPC**	CONTINGENCY BALANCE (incl. this change) **$34,254,586.15**
COST: **$1,346,090.00** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: Substitute LED Fixtures for Metal Halide	**PROJECT DESCRIPTION:** YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**9**

THIS CHANGE ORDER PROVIDES FOR:

Substituting LED luminaires for all the metal halide luminaires specified for the upper and lower decks of the Yerba Buena Island (YBI) tunnels of the San Francisco Oakland Bay Bridge (SFOBB).

The original Contract Change Order No. 159, Supplement No. 0, provided for the replacement of the existing luminaires of the YBI tunnel with new LED and metal halide luminaires. The new luminaires for the lower deck of the tunnel were specified to be predominately LED lighting with some metal halide lighting, with the upper deck specified to be metal halide lighting. The less preferred metal halide luminaires were specified under that change order due to the unavailability of an appropriate LED luminaire at that time. A luminaire has now been developed that will allow for LED lighting to be installed within the entire tunnel and this change order provides for this substitution of the originally specified metal halide luminaires with LED.

This change order will substitute 460 each LED luminaires for the 460 each metal halide luminaires specified under the original change order. Additional cost will be incurred predominately due to the more costly procurement of the LED fixture verses the metal halide fixture with some additional installation costs due to the changed luminaire.

At the April 11, 2013, Toll Bridge Program Oversight Committee (TBPOC) meeting, they approved the issuance of this change order for a cost not to exceed $1,350,000.00, copy attached.

Compensation for this work shall be paid as Extra Work at an Agreed Lump Sum of $1,246,090.00. Any necessary corrective work required on the existing luminaire components and any traffic control required for the work shall be paid as Extra Work at Force account at an estimated cost $100,000.00. The total estimated change order cost $1,346,090.00 shall be financed from the contract's contingency funds and shall be reimbursed through the Bay Area Toll Authority's Toll Bridge Rehabilitation Program as approved by the TBPOC. A cost estimate is on file.

No adjustment of contract time is required as the work will not affect the controlling operation.

Maintenance concurrence will be obtained from Lina Ellis, Structures Maintenance.

CONCURRED BY:		
Construction Engineer:	William Howe	Date 05·08·13
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Bob Zandipour, Design	Date 5-13-13
Project Manager:	Ken Terpstra	Date 5-9-13
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Lina Ellis, Str. Maintenance	Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:	Larry Salhaney	Date 5-9-13
Resident Engineer's Signature:		Date
William Howe		05·08·13

ESTIMATE OF COST		
	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$100,000.00	$700,000.00
AGREED PRICE	$1,246,090.00	$5,270,290.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$1,346,090.00	$5,970,290.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 159	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

1) Provide traffic control as necessary for performing the work of this change order as determined by the Engineer.

2) Perform corrective work on existing facilities due to unanticipated field conditions or conflicts with existing components pertaining to the installation of the YBI tunnel lighting as shown on Pages 3 through 68 of this change order as determined necessary by the Engineer.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with provisions of Section 4-1.03D, "Extra Work", of the Standard Specifications and Section 5-1.17, "Force Account Payment", of the Contract Special Provisions.

Estimated Cost of Extra Work at Force Account = $600,000.00

Extra Work at Lump Sum:

Remove existing luminaires and furnish and install new luminaires in the San Francisco Oakland Bay Bridge Yerba Buena Island (YBI) Tunnel structure and provide for the connection of the luminaires to the YBI substation as specified and shown on Pages 3 through 68 of this change order. The following luminaires shall be furnished and installed for the upper and lower decks of the tunnel:

Upper Deck - Westbound:

446 each 400 watt metal halide luminaires

Lower Deck - Eastbound:

14 each 400 watt metal halide luminaires
462 each 98 watt LED luminaires

This work includes furnishing and installing all hardware pertaining to the luminaires including mounting brackets, conduit, enclosures, junction boxes, power supply, cables and other appurtenances along with performing all power connections for the luminaires at the YBI substation and providing for the removal of all existing luminaires and facilities as specified and shown.

For this work, the Contractor shall be compensated an Agreed Lump Sum of $4,024,200.00, which constitutes full compensation, including all markups, complete in place for this change.

Any corrective work required on existing facilities due to unanticipated field conditions or conflicts with existing components pertaining to the installation of the new luminaires and hardware shall be paid as Extra Work at Force Account as specified herein.

Extra Work at Agreed Lump Sum $4,024,200.00

All materials furnished for this change order shall be approved by the Engineer prior to their purchase order being placed.

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 159	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

Estimated Cost: Increase ☑ Decrease ☐ $4,624,200.00

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by:

Signature	Resident Engineer	Date
William Howe	William Howe, Senior R.E.	01.25.13

Approval Recommended by:

Signature	Region Construction Division Chief	Date
Tony Anziano	Tony Anziano	1/25/13

Engineer Approval by:

Signature	Region Construction Division Chief	Date
Tony Anziano	Tony Anziano	2/15/13

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by:

Signature	(Print name and title)	Date
	EDMUND A. PUCHI, TREASURER	2/13/13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 12/21/2012 Page 1 of 1

TO: Deanna Vilcheck, ACM / [signature]

FROM: William Howe, Senior R.E.

FILE: E.A. 04 - 0120S4
CO-RTE-PM SF-80-12.7/13.2
FED. NO. NO FED AID

CCO#:	SUPPLEMENT#:	Category Code:
159	0	CBPC

CONTINGENCY BALANCE (incl. this change) **$31,684,663.15**

COST: **$4,624,200.00** INCREASE ☑ DECREASE ☐

HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO

SUPPLEMENTAL FUNDS PROVIDED. **$0.00**

IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO

CCO DESCRIPTION:
Replace YBI Tunnel Lighting

PROJECT DESCRIPTION:
YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	0 Day(s)	0 Day(s)	0 %	9

THIS CHANGE ORDER PROVIDES FOR:
Furnishing and installing new luminaires in the upper and lower decks of the Yerba Buena Island (YBI) tunnel of the San Francisco Oakland Bay Bridge (SFOBB).

The Toll Bridge Program Oversight Committee (TBPOC) approved this change order at their January 3, 2013, meeting to provide for the replacement of the existing YBI tunnel lighting. This approval was granted to advance this work in order to complete the lighting replacement prior to the planned seismic safety opening of the new SFOBB East Span in the latter half of 2013.

Plan sheets and specifications for the new tunnel lighting have been provided by Project Development. The change order will provide for furnishing and installing 460 each 400 watt metal halide luminaires and 462 each light-emitting diode (LED) luminaires along with installing conduit, mounting hardware and other appurtenances and providing for the power connection for the luminaires to the adjacent YBI substation. The upper deck of the tunnel will be comprised of the metal halide luminaires with the lower decking comprised predominately of LED luminaires. The change order also provides for the existing luminaires and appurtenances to be removed.

Compensation for this work shall be paid as Extra Work at an Agreed Lump Sum of $4,024,200.00. Any necessary corrective work required on the existing components on the tunnel or substation facilities and any traffic control required for the work shall be paid as Extra Work at Force Account at an estimated cost $600,000.00. The total estimated change order cost $4,624,200.00 shall be financed from the contract's contingency funds and shall be reimbursed through the Bay Area Toll Authority's Toll Bridge Rehabilitation Program as approved by the TBPOC. A cost estimate is on file.

No adjustment of contract time is required as the work will not affect the controlling operation.

Maintenance concurrence will be obtained from Lina Ellis, Structures Maintenance.

CONCURRED BY:

Construction Engineer:	William Howe	Date 01.25.13
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Bob Zandipour, Design	Date 1-28-13
Project Manager:	Ken Terpstra	Date 1/28/13
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Lina Ellis, Str. Maintenance	Date 2-19-13
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:	Larry Salhaney	Date 1-28-13
Resident Engineer's Signature:	William Howe	Date 01.25.13

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$600,000.00	$600,000.00
AGREED PRICE	$4,024,200.00	$4,024,200.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$4,624,200.00	$4,624,200.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

SFOBB MEP Integration Strategy (CONFIDENTIAL) 6-6-2013

	Segregation of Work	Approved Budget Nov 2008	Approved Budget Sep 2012	Executed CCOs / Projections	Comments
A	**Furnish Light Poles (BATA Contract)**				
Item A-1	Furnish Light Poles	$15,300,000.00	$5,888,909.00	$2,888,909.00	This is the Original Contract Amount for poles
Item A-2	Storage Cost	$1,500,000.00	$200,000.00	$150,000.00	Storage
	Change Order			$2,500,000.00	Change Orders
	Total Estimated Cost To Furnish Light Poles (BATA Contract)	**$16,800,000.00**	**$6,088,909.00**	**$5,538,909.00**	The fixtures were eliminated from this contract and added to Item 1B below.
B	**MEP Integration Work Installation**				
Item B-1	Install Light Poles (Skyway and OTD1), F&I LED fixture for corridor poles	$2,000,000.00	$13,500,000.00	$13,466,929.00	Fixtures were eliminated from pole contract and added to this item.
Item B-2	Installation of MEP items eliminated from Skyway & OTD1	$8,000,000.00	$8,000,000.00	$9,000,000.00	CCO 110, 903, 907, 908, 912, 913, 914, 915, 916, 801, 802,
Item B-3	Upgrades & Revisions of the already installed components (Skyway & OTD1)	$2,500,000.00	$2,500,000.00	$1,600,000.00	CCO 163
Item B-4	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	$2,000,000.00	$0.00		This work is included in Item D below
Item B-5	Contingency (20%), changed to 15% in January 2012	$2,900,000.00	$3,600,000.00	$3,610,039.35	
	Total Estimated Cost For Installation	**$17,400,000.00**	**$27,600,000.00**	**$27,676,968.35**	
Total for all Light Poles & MEP Integration Work (within Skyway & OTD1)		**$34,200,000.00**	**$33,688,909.00**	**$33,215,877.35**	Total of $34.2M for Items A & B was approved by TBPOC 11-6-2008
C	**System Wide Testing (Entire Corridor)**				
Item C-1	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	$3,000,000.00	$3,000,000.00	$2,500,000.00	CCO 905 & CCO 906
Item C-2	Resolution of system wide testing issues (for entire corridor)	$1,500,000.00	$1,500,000.00	$1,000,000.00	
Item C-3	Contingency (20%)	$900,000.00	$900,000.00	$700,000.00	
	Total Estimated Cost Of System wide Testing	**$5,400,000.00**	**$5,400,000.00**	**$4,200,000.00**	$5.4M (TBPOC May 6, 2010)
D	**Complete BASE System (Entire Corridor)**	**March 2010**	**Sep 2012**		
Item D-1	Hardware (Cameras, interface box and decoder for each camera / wiring)	$3,000,000.00	$3,000,000.00	$7,000,000.00	CCOs 901-S2, 150-S1
Item D-2	Installation cost (Camera & Hardware)	$1,500,000.00	$3,500,000.00		
Item D-3	New dedicated fiber line in both structures with 2 loops	$2,000,000.00	$2,000,000.00	$1,200,000.00	CCO's 901 & 901S1 on YBI and CCO 150 on SAS
Item D-4	Added wireless dish & supporting Equipment @ YBI-1, Licensed Frequency	N/A	$1,200,000.00	$1,200,000.00	CCO 904 (YBI-1 Project)
Item D-5	Network, Video Management & Monitoring (Hardware, Software, Server & Monitoring Rooms	N/A	$3,000,000.00	$2,500,000.00	CCOs 803, 911
Item D-6	Furnish & Install BASE cameras at YBI	N/A	$1,000,000.00	$1,500,000.00	
Item D-7	Pier Top Cameras, Motion Sensors & Camera wash units (F&I 48 of each)	N/A	$8,167,000.00	$7,000,000.00	
Item D-8	Contingency (20%)	$1,300,000.00	$4,373,400.00	$4,080,000.00	
	Total Estimated Cost for BASE System	**$7,800,000.00**	**$26,240,400.00**	**$24,480,000.00**	
	Total for all above items (Including BATA Contract)	**$47,400,000.00**	**$65,329,309.00**	**$61,895,877.35**	

	MEP Rehab Projects			Cost	
	Tunnel Lighting & Portal Lighting			$6,200,000.00	CCOs 159, 159-S1 & 910
	W4 substation transformer & W4 rehab			$1,900,000.00	CCOs 909 & 601
	Total MEP Rehab Projects			$8,100,000.00	

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b4

Item- Consent Calendar – Contract Change Orders (CCOs)

Yerba Buena Island Transition Structures (YBITS) No. 1 CCO 184-S0 – YBI Tunnel Polyester Concrete Overlay

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Recommendation:
APPROVAL

Cost:

CCO 184-S0	$2,955,215.00	*BATA Rehab. Funds

Schedule Impacts:
N/A

Discussion:

CCO 184-S0 in the amount of $2,955,215.00 will provide for placing a ¾"-thick polyester concrete overlay on both the upper and lower decks of the YBI Tunnel. Along with placing the overlay, the work includes removing the existing deck surface, replacing any unsound concrete, replacing existing joint seals, and rebuilding an existing expansion joint.

This CCO was approved at the May 9, 2013 TBPOC for a not-to-exceed amount of $2,300,000.00. The cost increase is due to higher than estimated impacts resulting from limited night-time lane closure windows. The cost of furnishing the polyester concrete was also underestimated.

The overlay will be placed over 1,215 LF of the 5-lane upper deck and 1,000 LF of the 5-lane lower deck covering approximately 131,000 square feet.

*Pending BATA Budget Approval in June 2013.

Risk Management:
Funding for the YBI tunnel overlay is provided by the Bay Area Toll Authority under their Toll Bridge Rehabilitation Program separate from the Toll Bridge Seismic Retrofit Program. As such, no risk management discussion is required.

Attachment(s):

1. Draft CCO: 184-S0
2. Draft CCO Memo: 184-S0

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 184	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Perform deck joint repairs, grinding and polyester concrete overlay per plans, "YBI Tunnel Overlay Sheets 1 and 2" (attached Sheet Nos. 3 and 4 of this change order).

The Engineer may also direct grinding, repair, preparation and overlay for additional nearby areas.

Work shall be performed in accordance with the Section 10-1.69, " Polyester Concrete Overlay", of the Contract Special Provisions.

Work shall be done in accordance with schedule perimeters as directed by the Engineer. The lump sum prices within this CCO are based on the following assumed schedule, any changes in this schedule will be subject to a corresponding adjustment in compensation:

The work associated with this change order (including temporary striping and pavement marking) shall be performed during night shift lane closures prior to the full closure, which is currently scheduled to begin August 28, 2013. This schedule anticipates that there are significant electrical and other work activities, including replace the lighting in the same tunnel (both decks), that will cause limitations and delays in access for the operations required to complete this change order. The coordination by the Contractor as required to complete all these activities by August 28, 2013, is included in the prices for this change order.

Extra Work at Force Account:

Apply temporary and permanent striping and markers.
Traffic control and lane closures beyond the work covered in unit prices.
SWPP measures (including BMP's, Best Management Practices, and management of stockpiled grindings).
Measures as required to meet revisions to assumed schedule, as approved by the Engineer.

Estimate of Extra Work at Force Account = $150,000.00

Extra Work at Unit Price:

1) Mobilization for this operation.	1 LS	@ $66,550.00 = $	66,550.00
2) Grind and Remove Existing PCC Surface 19 mm (includes removal of rumble strips and pavement markers within the grinding area).	12,179 M2	@ $ 39.00 = $	474,981.00
3) Remove Unsound Concrete and Patch with Rapid Setting Concrete.	19 M3	@ $ 6,600.00 = $	125,400.00
4) Prepare Concrete Pavement Surface (including shot blasting and placing methacrylate resin prime coat and placing polyester concrete).	12,179 M2	@ $ 48.00 = $	584,592.00
5) Furnish Polyester Concrete Overlay.	290 M3	@ $ 3,493.00 = $	1,012,970.00
6) Bridge Removal (Portion)	2 M3	@ $44,000.00 = $	88,000.00
7) Structure Concrete (Bridge Deck)	2 M3	@ $ 8,800.00 = $	17,600.00
8) Bar Reinforcing Steel	152 KG	@ $ 17.00 = $	2,584.00
9) Expansion Joint Seal MR = 2 inches	25 M	@ $ 248.00 = $	6,200.00
10) Expansion Joint Seal MR = 1/2 inch	870 M	@ $ 165.00 = $	143,550.00
11) Sawcut Cold Joint	1468 M	@ $ 110.00 = $	161,480.00
12) Mainline I-80 Lane Night Closure (when labor rates are paid at straight time, Monday through Friday night into Saturday AM, 8 hour max. closure)	20 EA	@ $ 3,325.00 = $	66,500.00
13) Mainline I-80 Lane Night Closure (when labor rates are at time and one-half, Saturday night to Sunday AM, 8 hour maximum closure)	4 EA	@ $ 4,319.00 = $	17,276.00
14) Mainline I-80 Lane Night Closure (when labor rates are double time, Sunday night to Monday AM or holiday to following day, 8 hour maximum closure)	4 EA	@ $ 5,161.00 = $	20,644.00
15) Extending Mainline I-80 Lane Closure Additional Hours (when labor rates are at time and one-half)	20 HRS	@ $ 422.00 = $	8,440.00

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 184	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

16) Extending Mainline I-80 Lane Closure Additional Hours (when labor rates are at double time) 16 HRS @ $ 528.00 = $ 8,448.00

EXTRA WORK AT UNIT PRICES = $2,805,215.00

The agreed unit prices for lane closure include labor, equipment and materials as required to close one, two or three lanes in one direction (Eastbound or Westbound Interstate 80), as determined by the Engineer

Full closures (all lanes in either direction) are not included in the unit prices of this change order.

Additional measures, such as directing traffic to or from an on-ramp or off-ramp, are not included in the unit prices of this change order.

The agreed prices excludes relocating, removing or installation of barrier rails (Type K or other), which will be paid for under a separate change order.

The agreed unit prices include all labor, equipment and materials as required. The agreed prices constitutes full payment, including all markups, for this change.

Estimated Cost: Increase ☑ Decrease ☐ **$2,955,215.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Signature	Resident Engineer William Howe, Senior R.E.	Date
Signature	**Region Construction Division Chief** Tony Anziano	**Date**
Signature	**Region Construction Division Chief** Tony Anziano	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /

FROM: William Howe, Senior R.E.

FILE: E.A. 04 - 0120S4

CO-RTE-PM SF-80-12.7/13.2

FED. NO. NO FED AID

CCO#: **184** | SUPPLEMENT#: **0** | Category Code: **CJPX**

CONTINGENCY BALANCE (incl. this change) **$33,492,310.15**

COST: **$2,955,215.00** INCREASE ☑ DECREASE ☐

HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO

SUPPLEMENTAL FUNDS PROVIDED: **$0.00**

IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO

CCO DESCRIPTION:
Polyester Conc.Overlay YBI Tunnel

PROJECT DESCRIPTION:
YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**9**

THIS CHANGE ORDER PROVIDES FOR:
This change order provides for performing deck joint repairs, grinding and polyester concrete overlay per plans, "YBI Tunnel Overlay Sheets 1 and 2", (attached sheet Nos. 3 and 4 of this change order).

This contract calls for the construction of the Yerba Buena Island Transition structures of the east span of the new San Francisco Oakland Bay Bridge (SFOBB). The existing Yerba Buena Island Tunnel is adjacent to the project site, with existing upper and lower concrete decks overlain by epoxy asphalt concrete. The riding surface is distressed with numerous failures in the asphalt concrete overlay. To provide a better riding surface and reduce the dead load on the support system, the existing overlay will be removed and replaced with a thinner, lighter, and more durable polyester concrete. This work is being done at the request of the Caltrans' Maintenance Department, which has responsibility for the upkeep of the tunnel. The overlay will also allow new bridge and existing deck surfaces to create a uniform riding surface, which will provide consistent traction and better lane line differentiation.

This change order provides for compensating the Contractor at Agreed Unit Prices for an amount of $2,805,215.00 for the work. The additional miscellaneous work required in this change order shall be paid as Extra Work at Force Account at an estimated cost of $150,000.00. The total amount estimated for this change order is $2,955,215.00, which will be financed through BATA Toll Bridge Rehabilitation funding. A copy of e-mail approval is attached. A detailed cost analysis for this change order is on file in the project records.

No adjustment in contract time of completion is warranted as this change does not affect the controlling operation.

This change was requested by Ken Brown, Office Chief, Structures Maintenance and Investigations, on March 11, 2013. Maintenance concurrence will be obtained from Lina Ellis, Structures Maintenance, for the final version of the CCO before issuing.

This change order was initially approved by TBPOC on May 9, 2013, for a NTE $2.3 million. Additional funding was requested for the TBPOC meeting June 8, 2013.

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Bob Zandipour, Design	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Lina Ellis, Str. Maintenance	Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:		Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$150,000.00	$150,000.00
AGREED PRICE	$2,805,215.00	$2,805,215.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$2,955,215.00	$2,955,215.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b5
Item - Consent Calendar – Contract Change Orders
OTD2 Contract – CCO 33-S1 Extend Maintenance of Temporary Trestle

Recommendation:
FOR APPROVAL

Cost:

OTD2 CCO 33-S0:	$953,561.55	Issued September 2012
OTD2 CCO 33-S1:	$238,255.92	

Schedule Impacts:
N/A

Discussion:
OTD2 **CCO 33-S1 in the amount of $238,255.92** will extend inspection and maintenance of the temporary trestle located between the new eastbound and westbound structures.

The trestle was constructed under CCO 33-S0 to provide uninterrupted access for the SAS contract to the new SFOBB east span from the eastern approach to the bridge and it also covered the costs for maintaining the trestle into the spring of 2013, when it was anticipated the trestle could be removed following completion of pre-SSO construction. It has now been determined that the trestle should be left in place until the completion of the permanent bike path in the summer of 2014 to mitigate access restrictions while the temporary bike path to the new structure is in place. CCO 33-S1 provides for this extended inspection and maintenance.

Risk Management:

The Oakland Touchdown 2 Risk Register carries a risk for the Bike Path removal and it includes impacts to other construction items as well. Risk Item "Removal of Temporary Bikepath - Structure" carries a range of $100K to $1M to address these issues. This change is within that range.

Attachment(s):

1. Draft OTD2 CCO 33-S1
2. Draft OTD2 CCO 33-S1 CCO Memo
3. OTD2 CCO 33-S0 CCO & CCO Memo

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 33	Suppl. No. 1	Contract No. 04 - 0120M4	Road 04-ALA-80-1.6/2.7	FED. AID LOC.: NO FED AID

To: **FLATIRON WEST INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Unit Price:

Extend the inspection and maintainence of the temporary access trestle through September 2014 and as determined by the Engineer at the agreed unit price specified in Contract Change Order No. 033-S0. The Department may shorten or lengthen the period of services as needed at the agreed unit price.

For this work, the Contractor will be paid $415.08 per calendar day. This price constitutes full compensation, including all markups, for the work of this change.

Cost of Extra Work at Agreed Unit Price $238,255.92

Estimated Cost: Increase ☑ **Decrease** ☐ **$238,255.92**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer	Date
	JEANNIE BALDERRAMOS	

Approval Recommended by

Signature	Area Construction Manager	Date
	DEANNA VILCHECK	

Engineer Approval by

Signature	Region Construction Division Chief	Date
	TONY ANZIANO	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: DEANNA VILCHECK / JEANNIE BALDERRAMOS	FILE: **E.A.** 04 - 0120M4
FROM: JEANNIE BALDERRAMOS	**CO-RTE-PM** 04-ALA-80-1.6/2.7
	FED. NO. NO FED AID
CCO#: **33** SUPPLEMENT#: **1** Category Code: **CHTC**	CONTINGENCY BALANCE (incl. this change) **$11,812,983.00**
COST: **$238,255.92** INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: Extend Maintenance of Trestle	**PROJECT DESCRIPTION:** CONSTRUCT BRIDGES AND ROADWAY, AND ELECTRICAL SYSTEM

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1140 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**0**

THIS CHANGE ORDER PROVIDES FOR:

extend the service, maintenance and removal of the temporary access trestle through September 2014 and as directed by the Engineer.

The Oakland Touchdown Project Phase II (OTD2) provides for the construction of the last remaining concrete box girder frame of the Oakland Touchdown structure and the construction of the remaining eastern roadway approach as part of the new east span of the San Francisco Oakland Bay Bridge (SFOBB).

The Oakland Touchdown 2 (OTD 2) completes the Oakland Mainland connector of the east span of the SFOBB. To be inclusive of all modes of transportation, the Toll Bridge Program Oversight Committee has directed the installation and opening of a temporary bikepath structure to coincide with the Seismic Safety Opening. This temporary bikepath sits in the southern footprint of the permanent maintenance road which will prevent completion of the maintenance road. Access to complete the northern portion of the maintenance road and other Stage 3 work will be obstructed by the construction of the permanent bikepath. The temporary access trestle will need to be maintained until the temporary bikepath can be removed.

Contract Change Order 33 - Supplemental 0 provides for construction of the temporary access trestle and a daily unit price for maintaining the trestle. This change, Supplemental 1, provides for the trestle to be maintained through September 2014.

This work is not part of the original contract; therefore, compensation for this work shall be paid as extra work at unit price of $ 415.08 per day for an estimated duration throught September 2014. This work can be financed from the contract contingency funds. A cost analysis is on file in the project records.

Maintenance concurrence is not required as this change does not affect the permanent structure.

No adjustment of contract time is warranted as this will not affect the controlling operation.

CONTRACT CHANGE ORDER MEMORANDUM

CONCURRED BY:		
Construction Engineer:	JEANNIE BALDERRAMOS	Date
Bridge Engineer:	GARY J LAI	Date
Project Engineer:	GABRIEL T CRUZ	Date
Project Manager:	KEN TERPSTRA	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	JAIME GUTIERREZ SR DGN ENG	Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:	LARRY SALHANEY	Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$238,255.92	$1,191,817.47
ADJUSTMENT	$0.00	$0.00
TOTAL	$238,255.92	$1,191,817.47

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

ORIGINAL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 33	Suppl. No. 0	Contract No 04 - 0120M4	Road 04-ALA-80-1.6/2.7	FED. AID LOC.: NO FED AID

To: **FLATRION WEST INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Unit Price:

For 24 weeks (168 days) inspect, maintain, and repair temporary detour including trestle, rip-rap, and abutments for site access as necessary, or as directed by the Engineer.

Caltrans may shorten or lengthen the period of services as needed at the agreed unit price.

For this work, the Contractor will be paid $415.08 per calendar day. This price constitutes full compensation, including all markups, for the work of this change.

Estimated cost of Extra Work at Agreed Unit Price $69,730.08

Extra Work at Lump Sum:

Furnish all materials, construct and remove when no longer required as determined by the Engineer, a temporary trestle to provide access through the jobsite during the construction of the eastbound structure. The trestle is to be constructed per the Department "Approved as Noted" FWI provided design of Submittal 081-00.

Work includes all construction to create a complete, functional and safe bypass including roadway, trestle, abutments, and appurtenances, shore protection, SWPPP, and removal of the trestle when no longer required.

Removed materials that are not to be salvaged or used in the reconstruction shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications as amended by the Special Provisions.

Shore protection includes maintaining the existing shoreline rip rap protection.

Complete work in accordance with all requirements of the permitting agencies and authorities having jurisdiction.

This change order excludes design and electrical work associated with this temporary access.

For this work, the Contractor will be paid the sum of $ 883,831.47. This sum constitutes full compensation for all labor, materials, equipment, tools and incidentals, including all markups, for the work of this change.

Extra Work at Agreed Lump Sum $ 883,831.47

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 33	Suppl. No. 0	Contract No. 04 - 0120M4	Road 04-ALA-80-1.6/2.7	FED. AID LOC.: NO FED AID

Consideration of a time adjustment will be deferred until completion of the work specified herein. Determination of a commensurate time extension will be made in accordance with Section 10-1.19, "Progress Schedule (Critical Path Method)", of the Special Provisions.

Estimated Cost: Increase ☑ Decrease ☐ **$953,561.55**

By reason of this order the time of completion will be adjusted as follows: Deferred

Submitted by

Signature	Resident Engineer	Date
	JEANNIE BALDERRAMOS	9-6-12

Approval Recommended by

Signature	Area Construction Manager	Date
Deanna Vilcheck	DEANNA VILCHECK	9/6/12

Engineer Approval by

Signature	Area Construction Manager	Date
Deanna Vilcheck	DEANNA VILCHECK	9/18/12

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date
	F. DAMAS — V.P.	09/18/12

ORIGINAL

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DATE: 8/3/2012 Page 1 of 1

TO: DEANNA VILCHECK / JEANNIE BALDERRAMOS	FILE: E.A. 04 - 0120M4
FROM: JEANNIE BALDERRAMOS	CO-RTE-PM 04-ALA-80-1.6/2.7
	FED. NO. NO FED AID
CCO# 33 SUPPLEMENT#: 0 Category Code: CHTC	CONTINGENCY BALANCE (incl. this change) $3,598,299.45
COST: $953,561.55 INCREASE ☑ DECREASE ☐	HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: $0.00	IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO
CCO DESCRIPTION: Construct Temporary Detour w/ Trestle.	**PROJECT DESCRIPTION:** CONSTRUCT BRIDGES AND ROADWAY, AND ELECTRICAL SYSTEM

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1140 Day(s)	DEF Day(s)	0 Day(s)	0 %	1

THIS CHANGE ORDER PROVIDES FOR:
a temporary detour including trestle for site access to the new westbound structure from Pier 7.

The Oakland Touchdown 2 (OTD2) completes the Oakland Mainland connector of the east span of the San Francisco Oakland Bay Bridge (SFOBB). The project is about 3,200 meters in length with a new East Bound structure comprised of concrete box girder bridges each approximately 26 meters wide, 40 meters high and 140 meters in length. Also included is 2,260 meters of striping and overlay on existing structures and 1,000 meters of striping and paving of roadway.

Falsework will severely limit the vertical and horizontal clearances of an existing access road leading from the Pier 7 campus to the new WB SFOBB. 24/7 access to this road is contractually obligated to the Contractor of the SAS Project (04-0120F4) per that Contract Special Provisions. Additionally, emergency vehicles use this road for ingress and egress to the jobsite. An alternate road is required to maintain this access. Thus construction of this temporary detour, including trestle, for site access is required.

Compensation for inspection, maintenance and repair of the temporary detour shall be paid as extra work at unit price of $ 415.08 per day for an estimated duration of 168 days. Compensation for the construction and removal of the temporary detour shall be paid as extra work at agreed lump sum of $883,831.47. The total of the Unit Price and Lump Sum is $953,561.55, which can be financed from the contingency funds.

A cost analyis is on file at the Resident Engineer's Office.

Consideration of a time adjustment will be deferred pending completion of the specified work.

Maintenance concurrence is not required as this change affects a temporary structure and doesn't affect any permanent roadway features.

CONCURRED BY:		
Construction Engineer:	JEANNIE BALDERRAMOS JB	Date 9-6-12
Bridge Engineer:	GARY J LAI	Date 9-7-2012
Project Engineer:	GABRIEL TCRUZ	Date 9-7-2012
Project Manager:	KEN TERPSTRA	Date 9-18-2012
FHWA Rep.:		Date
Environmental:		Date
Other (specify):		Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:	LARRY SALHANEY	Date 9/6/2012
Resident Engineer's Signature:	J Baldwin	Date 9-6-12

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$0.00	$0.00
AGREED PRICE	$953,561.55	$953,561.55
ADJUSTMENT	$0.00	$0.00
TOTAL	$953,561.55	$953,561.55

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

RE: Agenda No. - 2b6

Item- Consent Calendar – Contract Change Orders (CCOs)

Yerba Buena Island Transition Structures (YBITS) No. 1 CCO 911-S0 – CCTV Security Camera Networking & Video Management System

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Recommendation:
APPROVAL

Cost:
CCO 911-S0 $ 1,500,000.00

Schedule Impacts:
N/A

Discussion:
CCO 911-S0 in the amount of $1,500,000.00 will provide for furnishing and installing network servers, work stations, and storage appliances and developing, configuring, testing and commissioning the entire system for the new east span corridor closed caption televisions (CCTV) camera system.

This change provides for the networking of the approximately 180 cameras and the computer controls necessary to operate the cameras as required to provide for the planned surveillance of the bridge.

The work includes the following scope:

1) Furnishing, integrating, configuring and installing server, workstation and storage appliances at the control center located at the SFOBB Toll Plaza administration building.
2) Holding design workshops with the CHP, who will eventually operate the system, and preparing sample interface screens based on workshop input.
3) Organizing graphics for screen navigation and linking of graphic objects.
4) Configuring system database for IP addressing and naming convention.
5) Conducting factory acceptance testing of the system configuration.
6) Performing testing and commissioning of all system components as required.

The cost of this change order and previously issued and approved CCOs 901-S0, 901-S1, 901-S2, 904 for installing the Bay Area Security Enhancement (BASE) system are within the approved YBITS1 budget of $15,000,000.00 funded by BATA.

Total anticipated cost of furnishing and installing the BASE system for the entire new East Span is estimated at $26,240,000.00, as approved by TBPOC on September 20, 2012. This cost will be incurred over the YBITS1, YBITS2 and SAS contracts.

District 4 is working with the California Highway Patrol to develop the scope of work for the West Span's BASE improvements consistent with the CHP's on-going assessment. An estimate for the West Span BASE costs will be provided in the near future once this scope is determined.

Risk Management:

Funding for the SFOBB corridor BASE System is provided by the Bay Area Toll Authority separate from the Toll Bridge Seismic Retrofit Program. As such, no risk management discussion is required.

Attachment(s):

1. Draft CCO: 911-S0
2. Draft CCO Memo: 911-S0
3. Funding Integration Strategy Matrix

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO 911	Suppl. No. 0	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID

To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

Provide the following items of work for the operation of the corridor wide surveillance system being employed for the new San Francisco Oakland Bay Bridge (SFOBB) East Span as determined by the Engineer:

1) Furnish, integrate, configure and install server, workstation and storage appliances at the control center located at the SFOBB Toll Plaza administration building.

2) Hold graphic design workshops and prepare sample interface screens based on workshop input.

3) Organize graphics for screen navigation and linking of graphic objects.

4) Configure system database for IP addressing and naming convention.

5) Conduct factory acceptance testing of the completed system configuration.

6) Perform testing and commissioning of all system components as required.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with provisions of Section 4-1.03D, "Extra Work", of the Standard Specifications and Section 5-1.17, "Force Account Payment", of the Contract Special Provisions.

Extra Work at Force Account = $1,500,000.00

All materials furnished for this change order shall be approved by the Engineer prior to their purchase order being placed.

Estimated Cost: Increase ☑ **Decrease** ☐ **$1,500,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature	Resident Engineer	Date
	William Howe, Senior R.E.	

Approval Recommended by

Signature	Region Construction Division Chief	Date
	Tony Anziano	

Engineer Approval by

Signature	Region Construction Division Chief	Date
	Tony Anziano	

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	Date

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

TO: Deanna Vilcheck, ACM /	FILE: **E.A.** 04 - 0120S4
FROM: William Howe, Senior R.E.	**CO-RTE-PM** SF-80-12.7/13.2
	FED. NO. NO FED AID

CCO#: **911**	SUPPLEMENT#: **0**	Category Code: **CBPC**	CONTINGENCY BALANCE (incl. this change) **$31,125,266.15**
COST: **$1,500,000.00**	INCREASE ☑ DECREASE ☐		HEADQUARTERS APPROVAL REQUIRED? ☑ YES ☐ NO
SUPPLEMENTAL FUNDS PROVIDED: **$0.00**			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☑ YES ☐ NO

CCO DESCRIPTION:
BASE Network & Video Mgmt. System

PROJECT DESCRIPTION:
YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted: (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	**0** Day(s)	**0** Day(s)	**0** %	**9**

THIS CHANGE ORDER PROVIDES FOR:
Furnishing and installing network servers, work stations and storage appliances and developing, configuring, testing and commissioning the entire system for the new SFOBB east span corridor closed caption televisions (CCTV) camera system.

The new east span of the San Francisco Oakland Bay Bridge (SFOBB) is comprised of 4 main structures, the Yerba Buena Island Transition Structure (YBITS), the Self-Anchored Suspension (SAS) structure, the Skyway structure and the Oakland Touchdown (OTD) structure. The various projects have provided for furnishing and install CCTV camera across the entire corridor. This change provides for the networking of the approximately 180 cameras and the computer controls necessary to operate the cameras as required to provide the planned surveillance of the bridge.

The work includes the following scope:

1) Furnishing, integrating, configuring and installing server, workstation and storage appliances at the control center located at the SFOBB Toll Plaza administration building.

2) Holding graphic design workshops with the CHP who will eventually operate the system and preparing sample interface screens based on workshop input.

3) Organizing graphics for screen navigation and linking of graphic objects.

4) Configuring system database for IP addressing and naming convention.

5) Conducting factory acceptance testing of the completed system configuration.

6) Performing testing and commissioning of all system components as required.

The work will be paid as Extra Work at Force Account at an estimated cost $1,500,000.00, which will be financed from the contract's contingency funds. A cost estimate is on file.

No adjustment of contract time is required as the work will not affect the controlling operation.

Maintenance concurrence will be obtained from Lina Ellis, Structures Maintenance.

CONTRACT CHANGE ORDER MEMORANDUM

CONCURRED BY:		
Construction Engineer:	William Howe	Date
Bridge Engineer:	Mehran Ardakanian	Date
Project Engineer:	Bob Zandipour, Design	Date
Project Manager:	Ken Terpstra	Date
FHWA Rep.:		Date
Environmental:		Date
Other (specify):	Lina Ellis, Str. Maintenance	Date
Other (specify):		Date
District Prior Approval By:		Date
HQ (Issue Approve) By:		Date
Resident Engineer's Signature:		Date

ESTIMATE OF COST

	THIS REQUEST	TOTAL TO DATE
ITEMS	$0.00	$0.00
FORCE ACCOUNT	$1,500,000.00	$1,500,000.00
AGREED PRICE	$0.00	$0.00
ADJUSTMENT	$0.00	$0.00
TOTAL	$1,500,000.00	$1,500,000.00

FEDERAL PARTICIPATION

☐ PARTICIPATING ☐ PARTICIPATING IN PART ☑ NONE
☐ NON-PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING

FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)
☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS

FEDERAL FUNDING SOURCE	PERCENT

SFOBB MEP Integration Strategy (CONFIDENTIAL) 6-6-2013

	Segregation of Work	Approved Budget Nov 2008	Approved Budget Sep 2012	Executed CCOs / Projections	Comments
A	**Furnish Light Poles (BATA Contract)**				
Item A-1	Furnish Light Poles	$15,300,000.00	$5,888,909.00	$2,888,909.00	This is the Original Contract Amount for poles
Item A-2	Storage Cost	$1,500,000.00	$200,000.00	$150,000.00	Storage
	Change Order			$2,500,000.00	Change Orders
	Total Estimated Cost To Furnish Light Poles (BATA Contract)	**$16,800,000.00**	**$6,088,909.00**	**$5,538,909.00**	The fixtures were eliminated from this contract and added to Item 1B below.
B	**MEP Integration Work Installation**				
Item B-1	Install Light Poles (Skyway and OTD1), F&I LED fixture for corridor poles	$2,000,000.00	$13,500,000.00	$13,466,929.00	Fixtures were eliminated from pole contract and added to this item.
Item B-2	Installation of MEP items eliminated from Skyway & OTD1	$8,000,000.00	$8,000,000.00	$9,000,000.00	CCO 110, 903, 907, 908, 912, 913, 914, 915, 916, 801, 802,
Item B-3	Upgrades & Revisions of the already installed components (Skyway & OTD1)	$2,500,000.00	$2,500,000.00	$1,600,000.00	CCO 163
Item B-4	Installation of BASE System (conduits & Cabinets within Skyway & OTD1)	$2,000,000.00	$0.00		This work is included in Item D below
Item B-5	Contingency (20%), changed to 15% in January 2012	$2,900,000.00	$3,600,000.00	$3,610,039.35	
	Total Estimated Cost For Installation	**$17,400,000.00**	**$27,600,000.00**	**$27,676,968.35**	
Total for all Light Poles & MEP Integration Work (within Skyway & OTD1)		**$34,200,000.00**	**$33,688,909.00**	**$33,215,877.35**	Total of $34.2M for Items A & B was approved by TBPOC 11-6-2008
C	**System Wide Testing (Entire Corridor)**				
Item C-1	System wide (Entire Corridor) testing, Relay Setting, SCADA development & commissioning	$3,000,000.00	$3,000,000.00	$2,500,000.00	CCO 905 & CCO 906
Item C-2	Resolution of system wide testing issues (for entire corridor)	$1,500,000.00	$1,500,000.00	$1,000,000.00	
Item C-3	Contingency (20%)	$900,000.00	$900,000.00	$700,000.00	
	Total Estimated Cost Of System wide Testing	**$5,400,000.00**	**$5,400,000.00**	**$4,200,000.00**	$5.4M (TBPOC May 6, 2010)
D	**Complete BASE System (Entire Corridor)**	**March 2010**	**Sep 2012**		
Item D-1	Hardware (Cameras, interface box and decoder for each camera / wiring)	$3,000,000.00	$3,000,000.00	$7,000,000.00	CCOs 901-S2, 150-S1
Item D-2	Installation cost (Camera & Hardware)	$1,500,000.00	$3,500,000.00		
Item D-3	New dedicated fiber line in both structures with 2 loops	$2,000,000.00	$2,000,000.00	$1,200,000.00	CCO's 901 & 901S1 on YBI and CCO 150 on SAS
Item D-4	Added wireless dish & supporting Equipment @ YBI-1, Licensed Frequency	N/A	$1,200,000.00	$1,200,000.00	CCO 904 (YBI-1 Project)
Item D-5	Network, Video Management & Monitoring (Hardware, Software, Server & Monitoring Rooms	N/A	$3,000,000.00	$2,500,000.00	CCOs 803, 911
Item D-6	Furnish & Install BASE cameras at YBI	N/A	$1,000,000.00	$1,500,000.00	
Item D-7	Pier Top Cameras, Motion Sensors & Camera wash units (F&I 48 of each)	N/A	$8,167,000.00	$7,000,000.00	
Item D-8	Contingency (20%)	$1,300,000.00	$4,373,400.00	$4,080,000.00	
	Total Estimated Cost for BASE System	**$7,800,000.00**	**$26,240,400.00**	**$24,480,000.00**	
	Total for all above items (Including BATA Contract)	**$47,400,000.00**	**$65,329,309.00**	**$61,895,877.35**	

	MEP Rehab Projects			Cost	
	Tunnel Lighting & Portal Lighting			$6,200,000.00	CCOs 159, 159-S1 & 910
	W4 substation transformer & W4 rehab			$1,900,000.00	CCOs 909 & 601
	Total MEP Rehab Projects			$8,100,000.00	

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, Operations, MTC/BATA

RE: Agenda No. - 3a
Item- Progress Reports
Project Progress and Financial Update May 2013

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
Included in this package is a draft Project Progress and Financial Update May 2013, yet to be approved by the PMT under a TBPOC-delegated authority.

Attachment(s):
Project Progress and Financial Update May 2013 ver. 2.0 (see end of binder)

San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

Project Progress and Financial Update

May 2013

DRAFT VERSION 2.0

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

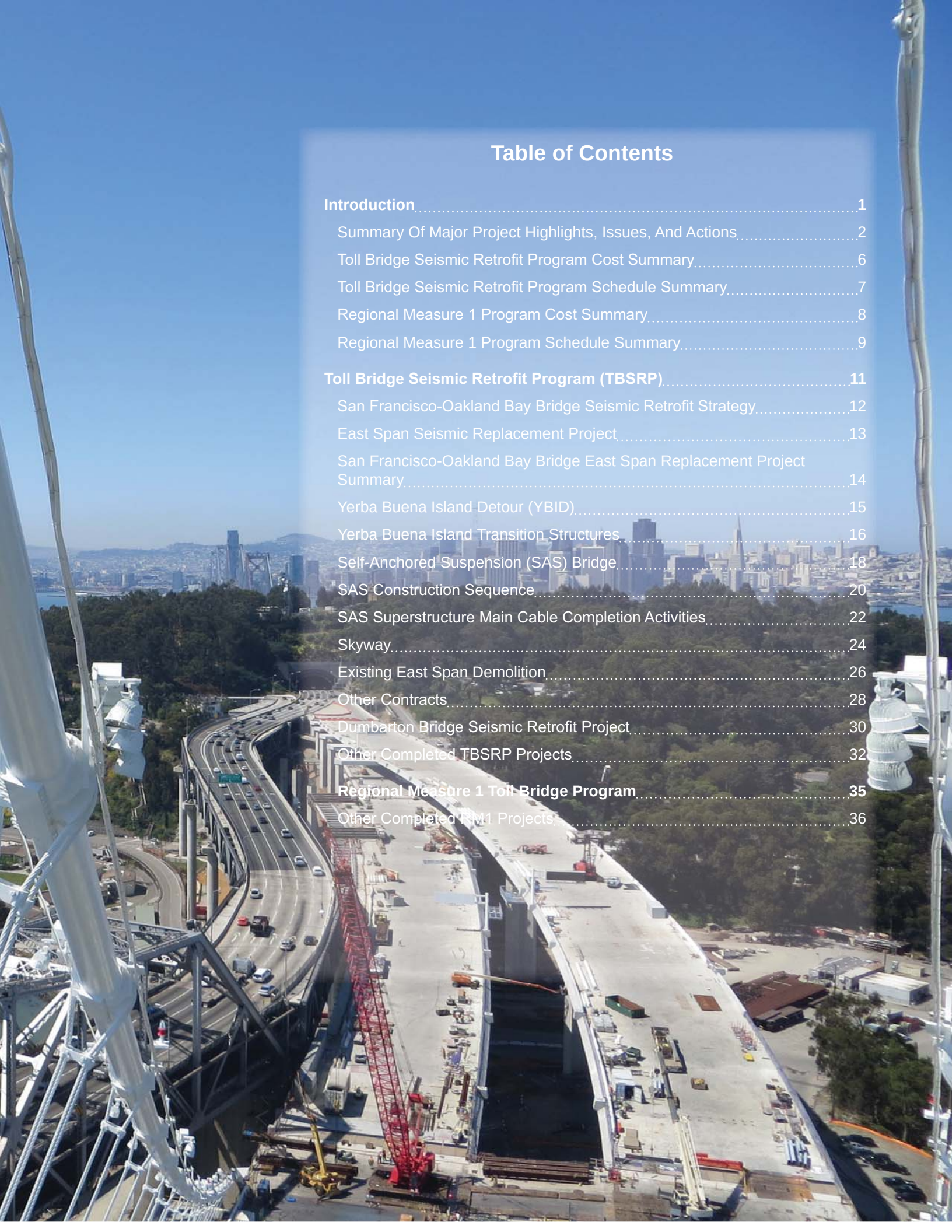
CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Released: May 2013

The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span Catwalk Removal

San Francisco-Oakland Bay Bridge
Self-Anchored Suspension Bridge Touch-Up
Painting of Suspender Ropes at south Sidespan

The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Span
Suspender Rope Separator Installation



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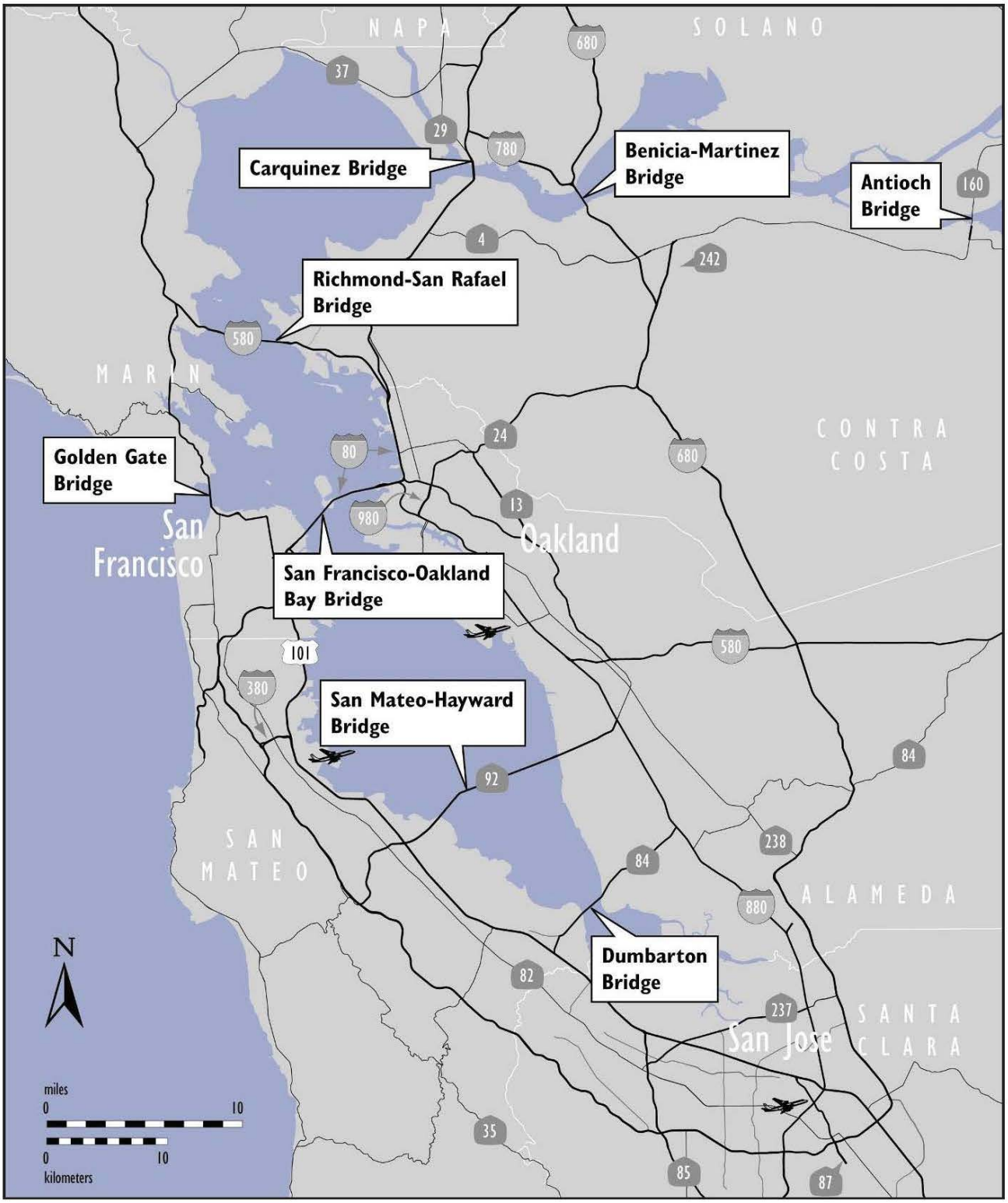
Map of Bay Area Toll Bridges



*** The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway and Transportation District.**

Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the new Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program (TBSRP) projects. The TBPOC consists of the Director of the California Department of Transportation (Caltrans), the Executive Director of the Bay Area Toll Authority (BATA) and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, reviewing and approving significant change orders and claims in excess of $1 million (as defined by the Committee), and keeping the Legislature and others apprised of current project progress and status.
In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton Bridges seismic retrofit projects. The current TBSRP is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Construction
Antioch Bridge Seismic Retrofit	Complete
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The New Benicia-Martinez Bridge is part of a larger program of toll-funded projects called the Regional Measure 1 (RM1) Toll Bridge Program under the responsibility of BATA and Caltrans. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans will continue to report on their progress as an informational item. The RM1 program includes:

Regional Measure 1 Projects	Open to Traffic Status
Interstate 880/State Route 92 Interchange Reconstruction	Open
1962 Benicia-Martinez Bridge Reconstruction	Open
New Benicia-Martinez Bridge	Open
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open

SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS

The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Bridge Ductile Iron Pipe Painting at Pier 7

The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Bridge View of Skyway Lightpoles and SAS Tower from the Skyway westbound

Self-Anchored Suspension Bridge View from the W2 Platform

Toll Bridge Seismic Retrofit Program Risk Management

A major element of the 2005 AB 144, the law creating the TBPOC, was legislative direction to implement a more aggressive risk management program. Such a program has been implemented in stages over time to ensure development of a robust and comprehensive approach to risk management.

On the new self-anchored suspension (SAS) span of the San Francisco-Oakland Bay Bridge, 32 of 96 anchor bolts fabricated in 2008 failed at Pier E2 after tensioning. These bolts secure the S1 and S2 shear keys to the pier cap under the east end of the SAS bridge deck and were tensioned in early March before failing a number of days later (see diagrams on preceding pages). Caltrans has confirmed that the 2008 bolts failed due to hydrogen embrittlement. The hydrogen contamination may have come from both internal and external sources.

Caltrans is currently working on several retrofit strategies to replace the 2008 bolts that can no longer be used. An additional 192 bolts fabricated in 2010 used to hold down the remaining shear keys and bearings on E2 have been tensioned and have not had any failures. A number of 2010 bolts will be removed for more extensive testing to identify any differences between the 2010 bolts and 2008 bolts and to evaluate their capacity to perform as designed. Further, the TBPOC reported that visual inspection and desk audit of other similar bolt materials is underway.

Over the next two weeks, the TBPOC will be selecting a retrofit design strategy that will replace the 2008 bolts and determining the cost and schedule impacts of the solution. The TBPOC will continue to provide regular updates to the public on this issue at Bay Area Toll Authority meetings.

A comprehensive risk assessment is performed for each project in the program on a quarterly basis. Based upon those assessments, a forecast is developed using the average cost of risk. These forecasts can both increase and decrease as risks are identified, resolved or retired. Nonetheless, assurances have been made that the public is informed of the risks that have been identified and the possible expense they could necessitate.

The program contingency is currently $329 million in accordance with the TBPOC approved budget. As of the end of the first quarter of 2013, the 50 percent probable draw on program contingency is $103 million. The potential draw ranges from about $25 million to $175 million (see page 36).

The current program contingency balance is sufficient to cover the cost of currently identified risks. In accordance with the approved TBSRP Risk Management Plan, risk mitigation actions are continuously developed and implemented to reduce the potential draw on the program contingency.

YBITS #1 Slope Drainage Being Installed

San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Replacement Project

Self-Anchored Suspension (SAS) Bridge Superstructures Contract

A joint venture of American Bridge/Fluor (ABF) is constructing the signature Self-Anchored Suspension (SAS) section of the new east span of the San Francisco-Oakland Bay Bridge. The SAS is a self-anchoring suspension span with one main cable that anchors to the eastern end of the roadway deck, rather than to the ground anchorages. Now with all major bridge components in place, i.e. the tower, roadway deck, and main cable and suspenders, work is now to transfer the weight of the span from the temporary supports to the main cable, a complex time- and labor-intensive process known as load transfer.

Two hundred steel wire suspender ropes, attached to 100 cable bands along the single main cable, did the heavy lifting during load transfer. Sets of suspender ropes were gradually tensioned using hydraulic jacks; as each cable band carries two ropes, there are four hydraulic jacks (each exerting as much as 400 tons of force) at each corresponding location along the outside of the road-decks tensioning and pulling the ropes into position. Following load transfer, remaining critical activities include painting, paving, striping, and installing and testing of the bridge's mechanical, electrical and plumbing systems. The TBPOC's goal is to open the bridge to traffic in both directions by September 2013.

The San Francisco-Oakland Bay Bridge Skyway and Self-Anchored Suspension Span on the right and the Existing Bridge on the left

SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS

YBITS #1 Sign Structures Installed on Eastbound and Westbound Roadways

Yerba Buena Island Transition Structure (YBITS) #1 Contract

MCM Construction, Inc. is the prime contractor constructing the Yerba Buena Island Transition Structure #1 (YBITS #1) contract. Their work includes completing the remaining foundations and the bridge deck structure from the existing double deck Yerba Buena Island Tunnel to the SAS bridge.

MCM has substantially completed both the eastbound and westbound transition structures from the tunnel to the Hinge K and is currently working on the service platforms lighting signage slope restoration and bikepath support.

Aerial View of the San Francisco-Oakland Bay Bridge YBITS Structure on the left and the Yerba Buena Island Detour Structure on the right

Yerba Buena Island Transition Structure (YBITS) #2 and Cantilever Demolition Contract

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The contract also includes the cantilever truss demolition, eastbound on ramp and bike path construction. The contract was awarded to California Engineering Contractors Inc/Silverado Contractors Inc. Joint Venture on November 28, 2012. Initial startup activities and submittals began in March 2013, with actual dismantling to start in September 2013, after seismic safety opening of he new bridge.

Oakland Touchdown #2 Contract

Flatiron West, Inc. is the prime contractor constructing the Oakland Touchdown #2 contract that will complete the remaining portions of the Oakland Touchdown approach structures from the existing toll plaza to the new span. The westbound structure and portions of the eastbound structure (not in conflict with the existing span) were constructed under the Oakland Touchdown #1 contract. The OTD #2 construction contract started on June 25, 2012. The mainline structure work is substantially complete and is currently concentrating on the eastbound approach. After bridge opening, the contractor will complete landscaping of the area and will construct the remaining portion of the permanent bicycle/pedestrian pathway that is in conflict with the existing bridge, by 2014.

Existing SFOBB Dismantling Contracts

To expedite the opening of a new eastbound on-ramp and the pedestrian/bicycle pathway from Yerba Buena Island, the TBPOC decided to split the bridge dismantling project into at least two contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge has been incorporated into the YBITS #2 contract, while the remaining portions of the existing bridge will be removed by separate contract(s) still in design and planned for advertisement in late August 2013.

Existing San Francisco-Oakland Bay Bridge Cantilever Section to Be Dismantled as Part of the YBITS #2 Contract in foreground with New bridge in background

Antioch Bridge Seismic Retrofit

The major retrofit strategy for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents, and installing steel casings at all columns located at the Sherman Island approach slab bridge. Seismic safety opening was achieved on April 12, 2012, and contract was completed on July 13, 2012.

Antioch Bridge

Dumbarton Bridge Seismic Retrofit

The Dumbarton Bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast pre-stressed concrete girders and steel box girders supported on reinforced concrete piers. The retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings. Seismic safety opening was achieved on January 16, 2013, and the contract is expected to be completed on May 16, 2013.

Dumbarton Bridge

Toll Bridge Seismic Retrofit Program Cost Summary (Millions)

	Contract Status	AB 144/SB 66 Budget (September 2005)	TBPOC Approved Changes	Current TBPOC Approved Budget (April 2013)	Cost to Date (April 2013)	Current Cost Forecast (April 2013)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
SFOBB East Span Seismic Replacement								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(55.8)	1,237.2	1,237.3	1,237.2	-	●
SAS Marine Foundations	Completed	313.5	(38.7)	274.8	274.8	278.6	3.8	●
SAS Superstructure	Construction	1,753.7	293.1	2,046.8	1,794.2	2,059.3	12.5	●
YBI Detour	Completed	131.9	334.2	466.1	466.1	473.3	7.2	●
YBI Transition Structures (YBITS)		299.3	(3.9)	295.4	175.8	308.0	12.6	●
YBITS 1	Construction			199.7	172.7	213.7	14.0	●
YBITS 2 Cantilever and Demo	Awarded			92.4	3.1	91.0	(1.4)	●
YBITS Landscaping	Design			3.3	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	39.9	323.7	256.4	323.4	(0.3)	●
OTD 1	Completed			205.0	204.8	203.3	(1.7)	●
OTD 2	Construction			62.0	18.2	66.1	4.1	●
Detour	Completed			51.0	27.7	44.4	(6.6)	●
OTD Electrical Systems	Design			-	-	-	-	●
Submerged Electric Cable	Completed			5.7	5.7	9.6	3.9	●
Existing Bridge Demolition	Design	239.2	(0.1)	239.1	-	233.7	(5.4)	●
*Cantilever Section	Awarded			-	-	60.3		●
*504/288 Sections	Design			-	-	88.4		●
*Marine Foundations	Design			-	-	85.0		●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.8	18.3	-	●
Other Completed Contracts	Completed	90.4	(0.5)	89.9	90.0	90.5	0.6	●
Capital Outlay Support		959.3	262.3	1,221.6	1,132.4	1,279.4	57.8	●
Right-of-Way and Environmental Mitigation		72.4	-	72.4	51.7	80.4	8.0	●
Other Budgeted Capital		35.1	(32.8)	2.3	0.7	7.7	5.4	●
Total SFOBB East Span Replacement		5,486.6	801.0	6,287.6	5,496.2	6,389.8	102.2	
Antioch Bridge Seismic Retrofit								
Capital Outlay Construction and Mitigation	Completed		51.0	51.0	47.0	50.3	(0.7)	●
Capital Outlay Support			31.0	31.0	23.5	23.8	(7.2)	●
Total Antioch Bridge Seismic Retrofit		-	82.0	82.0	70.5	74.1	(7.9)	●
Dumbarton Bridge Seismic Retrofit								
Capital Outlay Construction and Mitigation	Completed		92.7	92.7	62.8	69.5	(23.2)	●
Capital Outlay Support			56.0	56.0	43.3	45.4	(10.6)	●
Total Dumbarton Bridge Seismic Retrofit		-	148.7	148.7	106.1	114.9	(33.8)	●
Other Program Projects		2,268.4	(63.6)	2,204.8	2,164.2	2,192.5	(12.3)	
Miscellaneous Program Costs		30.0	-	30.0	25.5	30.0	-	●
Net Programmatic Risks		**-**	**-**	**-**	**-**	**32.6**	**32.6**	●
Program Contingency		**900.0**	**(571.1)**	**328.9**	**-**	**206.5**	**(122.4)**	●
Total Toll Bridge Seismic Retrofit Program [2]		**8,685.0**	**397.0**	**9,082.0**	**7,862.5**	**9,040.4**	**(41.6)**	

Toll Bridge Seismic Retrofit Program Schedule Summary

	AB 144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completion Schedule (April 2013)	Current Completion Forecast (April 2013)	Schedule Variance (Months)	Schedule Status	Remarks/ Notes
	g	h	i=g+h	j	k=j-i	l	
SFOBB East Span Seismic Replacement							
Contract Completion							
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●	See Page 24
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●	See Page 18
SAS Superstructure	Mar 2012	29	Aug 2014	Aug 2014	-	●	See Page 19
YBI Detour	Jul 2007	39	Oct 2010	Oct 2010	-	●	See Page 15
YBI Transition Structures (YBITS)	Nov 2013	27	Feb 2016	Feb 2016	-		See Page 16
YBITS 1			Dec 2013	Dec 2013	-		
YBITS 2			Feb 2016	Feb 2016	-	●	
Oakland Touchdown	Nov 2013	10	Sep 2014	Sep 2014	-	●	See Page 25
OTD 1			Jun 2010	Jun 2010	-	●	
OTD 2			Sep 2014	Sep 2014	-	●	
Submerged Electric Cable			Jan 2008	Jan 2008	-	●	
Existing Bridge Demolition	Sep 2014	18	Dec 2015	March 2017	15	●	
Stormwater Treatment Measures	Mar 2008		Mar 2008	Mar 2008	-	●	
SFOBB East Span Bridge Opening and Other Milestones							
Westbound Seismic Safety Open	Sep 2011	27	Dec 2013	Sep 2013	(3)	●	
Eastbound Seismic Safety Open	Sep 2012	15	Dec 2013	Sep 2013	(3)	●	
Bike/Ped Pathway Open to YBI			Sep 2015	Sep 2015	-	●	
Permanent Eastbound On Ramp Open			Sep 2015	Sep 2015	-		
Oakland Detour Eastbound Open			May 2011	May 2011	-	●	
Oakland Detour Westbound Open			Feb 2012	Feb 2012	-	●	
OTD Westbound Access			Aug 2009	Aug 2009	-	●	
YBI Detour Open			Sep 2009	Sep 2009	-		See Page 15
Antioch Bridge Seismic Retrofit							See Page 33
Contract Completion			Jul 2012	Jul 2012	-		
Seismic Safety Completion			Apr 2012	Apr 2012	-	●	
Dumbarton Bridge Seismic Retrofit							See Page 30
Contract Completion			Sep 2013	Mar 2013	(6)	●	
Seismic Safety Completion			Sep 2013	Jan 2013	(6)		

● Within approved schedule and budget
● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
● Known project impacts with forthcoming changes to approved schedules and budgets

(1) Figures may not sum up to totals due to rounding effects.
(2) Construction administration of the OTD Detour is under the YBITS#1 contract.
(3) Construction administration of the Cantilever segment will be under the YBITS#2 contract.

Regional Measure 1 Program Cost Summary (Millions)

	Contract Status	BATA Baseline Budget (July 2005)	BATA Approved Changes	Current BATA Approved Budget (April 2013)	Cost to Date (April 2013)	Current Cost Forecast (April 2013)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
Interstate 880/Route 92 Interchange Reconstruction								
Capital Outlay Construction	Complete	94.8	68.4	163.2	150.2	163.2	-	●
Capital Outlay Support		28.8	35.8	64.6	62.2	64.6	-	●
Capital Outlay Right-of-Way		9.9	7.3	17.2	15.4	17.2	-	●
Project Reserve		0.3	(0.3)	-	-	-	-	
Total I-880/SR-92 Interchange Reconstruction		133.8	111.2	245.0	227.8	245.0	-	
Other Completed Program Projects		1,978.8	182.6	2,161.4	2,089.4	2,161.4	-	
Total Regional Measure 1 Toll Bridge Program [1]		**2,112.6**	**293.8**	**2,406.4**	**2,317.2**	**2,406.4**	-	

● Within approved schedule and budget
● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
● Known project impacts with forthcoming changes to approved schedules and budgets

[1] Figures may not sum up to totals due to rounding effects.

Regional Measure 1 Program Schedule Summary

	BATA Baseline Completion Schedule (September 2005)	BATA Approved Changes (Months)	Current BATA Approved Completion Schedule (April 2013)	Current Completion Forecast (April 2013)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i=g+h	j	k=j-i	l	
Interstate 880/Route 92 Interchange Reconstruction							
Contract Completion							
Interchange Reconstruction	Dec 2010	9	Sep 2011	Sep 2011	-	●	See Page 43

Self-Anchored Suspension Bridge Crane Removal

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge Seismic Retrofit Strategy

When a 250-ton section of the upper deck of the East Span collapsed during the 7.1-magnitude Loma Prieta Earthquake in 1989, it was a wake-up call for the entire Bay Area. While the East Span quickly reopened within a month, a critical question lingered: How could the Bay Bridge - a vital regional lifeline structure - be strengthened to withstand the next major earthquake? Seismic experts from around the world determined that to make each separate element seismically safe on a bridge of this size, the work must be divided into numerous projects. Each project presents unique challenges. Yet there is one common challenge - the need to accommodate the more than 280,000 vehicles that cross the bridge each day.

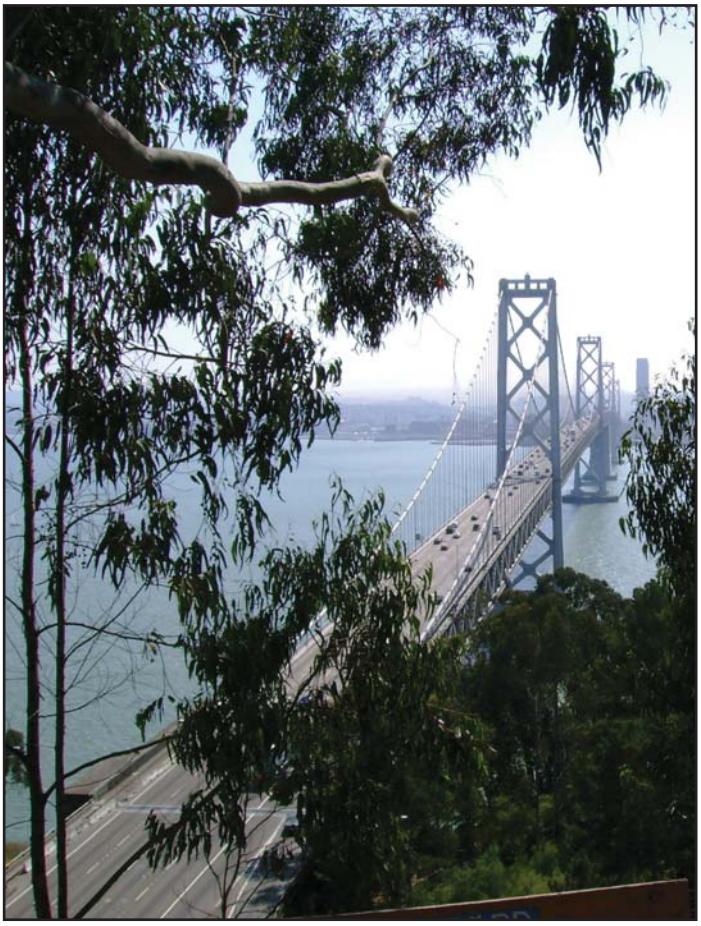
The San Francisco-Oakland Bay Bridge West Approach Overview

West Approach Seismic Replacement Project
Project Status: Completed 2009

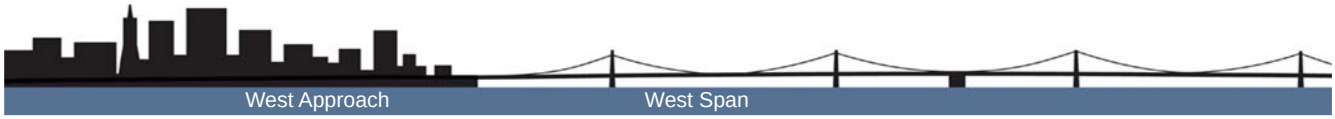
Seismic safety retrofit work on the West Approach in San Francisco, bounded on the west by Fifth Street and on the east by the anchorage of the west span at Beale Street, involved completely removing and replacing this one-mile stretch of Interstate 80, as well as six on-and off-ramps within the confines of the West Approach's original footprint. This project was completed on April 8, 2009.

West Span Seismic Retrofit Project
Project Status: Completed 2004

The West Span lies between Yerba Buena Island and San Francisco and is made up of two complete suspension spans connected at a center anchorage. Retrofit work included adding massive amounts of steel and concrete to strengthen the entire West Span, along with new seismic shock absorbers and bracing.



San Francisco-Oakland Bay Bridge West Span



East Span Seismic Replacement Project
Project Status: In Construction

Rather than a seismic retrofit, the two-mile long East Span is being completely rebuilt. When completed, the new East Span will consist of several different sections, but will appear as a single streamlined span. The eastbound and westbound lanes of the East Span will no longer include upper and lower decks. The lanes will instead be side-by-side, providing motorists with expansive views of the bay. These views will also be enjoyed by bicyclists and pedestrians, thanks to a new bike/pedestrian path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span is aligned north of the existing bridge to allow traffic to continue to flow on the existing bridge as crews build the new span.

The new span will feature the world's longest Self-Anchored Suspension (SAS) bridge that will be connected to an elegant roadway supported by piers (Skyway), which will gradually slope down toward the Oakland shoreline (Oakland Touchdown). A new transition structure on Yerba Buena Island (YBI) will connect the SAS to the YBI Tunnel and will transition the East Span's side-by-side traffic to the upper and lower decks of the tunnel and West Span.

When construction of the new East Span has been completed and vehicles have been safely rerouted to it, the original East Span will be demolished.

The Self-Anchored Suspension Bridge Tower and Roadway Deck Construction Progress Overview

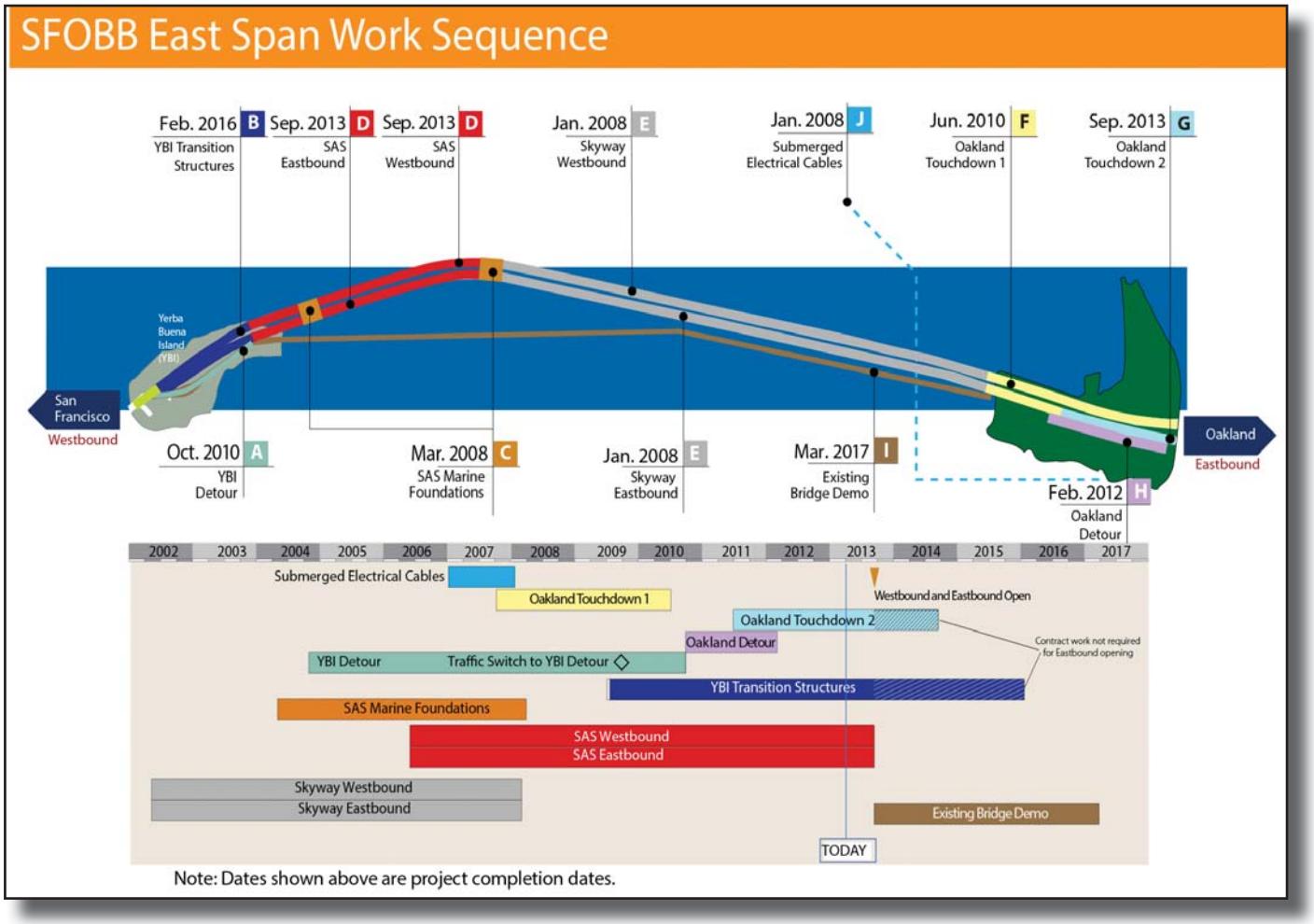
TOLL BRIDGE SEISMIC RETROFIT PROGRAM

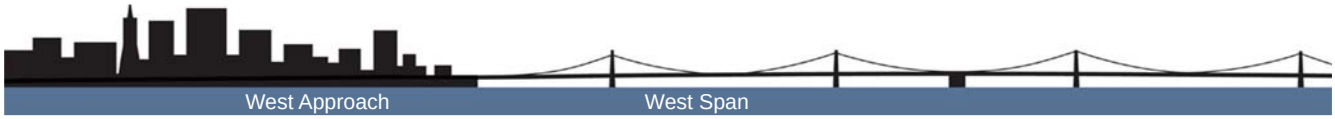
San Francisco-Oakland Bay Bridge East Span Replacement Project Summary

The new East Span bridge can be split into four major components - the Skyway, the Self-Anchored Suspension bridge in the middle, the Yerba Buena Island Transition Structures and Oakland Touchdown approaches. Each component is being constructed by one to three separate contracts that have been sequenced together to reduce schedule risk.

Highlighted below are the major East Span contracts and their schedules. The letter designation before each contract corresponds to contract descriptions in the report.

Overview of the San Francisco-Oakland Bay Bridge East Span Construction Progress





TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Yerba Buena Island Detour (YBID)

As with all of the Toll Bridge Seismic Retrofit Program's projects, crews built the Yerba Buena Island Detour (YBID) structure without disrupting traffic. To accomplish this task, YBID eastbound and westbound traffic was shifted off the existing roadway and onto a temporary detour over Labor Day weekend 2009. Drivers will use this detour, just south of the original roadway, until traffic is moved onto the new East Span.

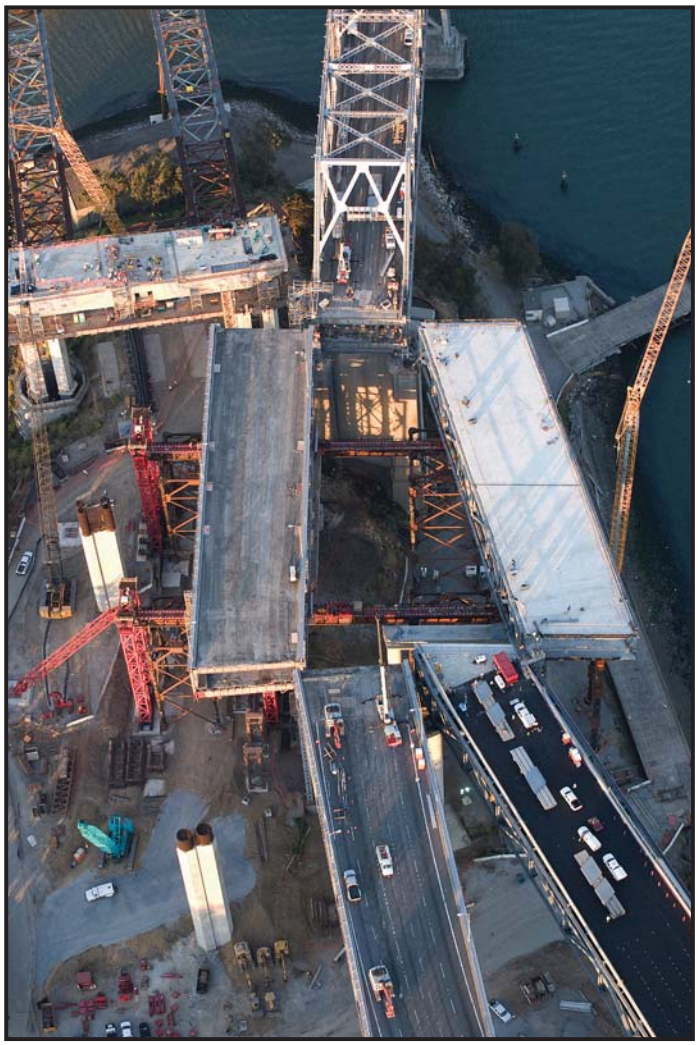
A YBID Contract

Contractor: C.C. Myers, Inc.

Approved Capital Outlay Budget: $466.1 M

Status: Completed October 2010

This contract was originally awarded in early 2004 to construct the detour structure for the planned 2006 opening of the new East Span. Because of a lack of funding, the SAS Superstructure contract was re-advertised in 2005 and the opening was rescheduled to 2013. To better integrate the contract into the current East Span schedule and to improve seismic safety and mitigate future construction risks, the TBPOC approved a number of changes to the contract, including adding the deck replacement work near the tunnel that was rolled into place over the Labor Day 2007 weekend advancing future transition structure foundation work and making design enhancements to the temporary detour structure. These changes increased the budget and forecast for the contract to cover the revised project scope and reduce project risks.



YBID East Tie-In Rolled in on Labor Day 2009 Weekend

West Tie-In Phase # 1 Rolled in on Labor Day Weekend 2007

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Yerba Buena Island Transition Structures (YBITS)

The new Yerba Buena Island Transition Structures contract (YBITS) will connect the new SAS bridge span to the existing Yerba Buena Island Tunnel, transitioning the new side-by-side roadway decks to the upper and lower decks of the tunnel. The new structures will be cast-in-place reinforced concrete structures that will look very similar to the already constructed Skyway structures. While some YBITS foundations and columns were advanced by the YBID contract, the remaining work is being completed under three separate YBITS contracts.

B YBITS #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: $199.7 M

Status: 85% Complete as of April 2013

MCM Construction, Inc. is the prime contractor constructing the Yerba Buena Island Transition Structure #1 (YBITS #1) contract. Their work includes completing the remaining foundations and the bridge deck structure from the existing double deck Yerba Buena Island Tunnel to the SAS bridge.

Status: The contractor is working on the backfilling of the retaining wall and restoration of the slope. MCM installed the sign structures for the west and eastbound roadway decks and continues to work on the bike path support, service lighting pole installation and service platforms.

YBITS #2 and Cantilever Demolition Contract

Contractor: CEC & Silverado (JV)

Approved Capital Outlay Budget: $92.4 M

Status: Contract Awarded

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The new ramp will also provide the final link for bicycle/pedestrian access off the SAS bridge onto Yerba Buena Island. To expedite opening of a new eastbound on-ramp and the pedestrian/bicycle pathway from Yerba Buena Island, the TBPOC has decided to split the bridge dismantling project into at least two contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge will be incorporated into the YBITS #2 contract, while the remaining portions of the existing bridge will be removed by separate contract or contracts yet to be determined.

Status: The YBITS #2 contract, which includes the cantilever truss demolition, was awarded to California Engineering Contractors Inc/Silverado Contractors Inc. Joint Venture on November 28, 2012. The contractor is holding partnering meetings with Caltrans and is in the process of establishing their document control system, reviewing RFIs, CCOs, SWPPP and a bird monitoring plan for approval. Dismantling is planned for September 2013, after the opening of the new eastern span of the bridge.

YBITS Landscaping Contract

Contractor: TBD

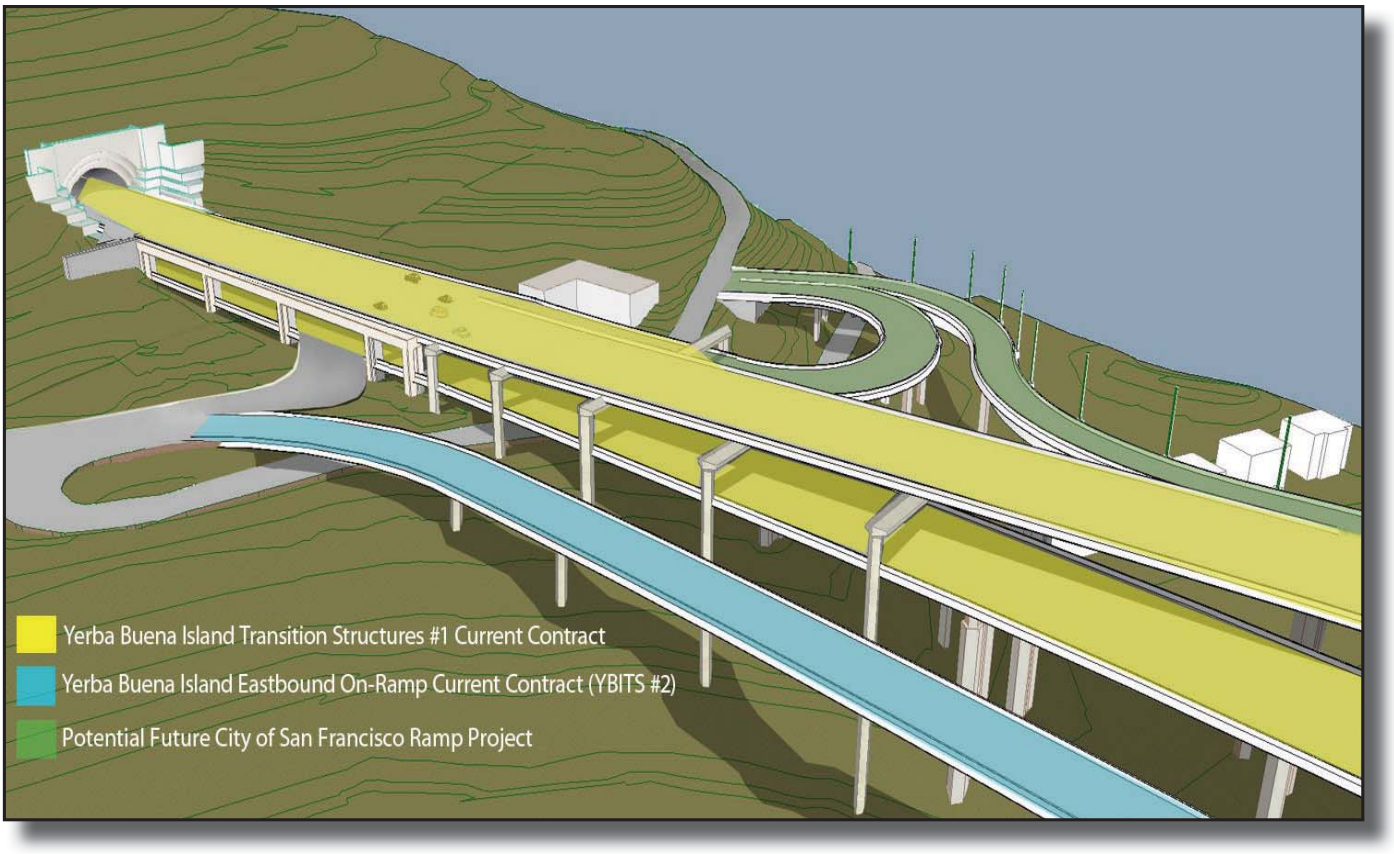
Approved Capital Outlay Budget $3.3 M

Status: In Design

Upon completion of the YBITS #2 work, a follow-on landscaping contract will be executed to replant and landscape the area.

Aerial View of the Yerba Buena Island Transition Structures and the New San Francisco-Oakland Bay Bridge Bike Path Included in the YBITS #2 Contract

Aerial View of the Yerba Buena Island Transition Structures and the New San Francisco-Oakland Bay Bridge



TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension (SAS) Bridge

If one single element bestows world class status on the new Bay Bridge East Span, it is the Self-Anchored Suspension (SAS) bridge. This engineering marvel will be the world's largest SAS span at 2,047 feet in length, as well as the first bridge of its kind built with a single tower.

The SAS was separated into three separate contracts - construction of the land-based foundations and columns at pier W2; construction of the marine-based foundations and columns at piers T1 and E2; and construction of the SAS steel superstructure, including the tower, roadway and cabling. Construction of the foundations at pier W2 and at piers T1 and E2 was completed in 2004 and 2007, respectively.

SAS Land Foundation Contract

Contractor: West Bay Builders, Inc.
Approved Capital Outlay Budget: $26.5 M
Status: Completed October 2004

The twin W2 columns on Yerba Buena Island provide essential support for the western end of the SAS bridge, where the single main cable for the suspension span will extend down from the tower and wrap around and under the western end of the roadway deck. Each of these huge columns required massive amounts of concrete and steel and are anchored 80 feet into the island's solid bedrock.

SAS Marine E2 Foundation and the Skyway Westbound Column

C SAS Marine Foundations Contract

Contractor: Kiewit/FCI/Manson, Joint Venture
Approved Capital Outlay Budget: $274.8 M
Status: Completed January 2008

Construction of the piers at E2 and T1 (see rendering on facing page) required significant on-water resources to drive the foundation support piles down, not only to bedrock, but also through the bay water and mud.

The T1 foundation piles extend 196 feet below the waterline and are anchored into bedrock with heavily reinforced concrete rock sockets that are drilled into the rock. Driven nearly 340 feet deep, the steel and concrete E2 foundation piles were driven 100 feet deeper than the deepest timber piles of the existing east span in order to get through the bay mud and reach solid bedrock.

D SAS Superstructure Contract

Contractor: American Bridge/Fluor Enterprises, Joint Venture
Approved Capital Outlay Budget: $2.05 B
Status: 92% Complete as of April 2013

The SAS bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in bedrock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. While there will appear to be two main cables on the SAS, it is actually a single continuous cable. This single cable will be anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower is made up of four separate legs connected by shear link beams, which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs.

Two hundred steel wire suspender ropes attached to 100 cable bands along the single main cable did the heavy lifting during load transfer. Sets of suspender ropes were gradually tensioned using hydraulic jacks. As each cable band carries two ropes, there are four hydraulic jacks (each exerting as much as 400 tons of force) at each corresponding location along the outside of the road decks tensioning and pulling the ropes into position. Following load transfer, remaining critical activities include wrapping of the main cable, painting, paving, striping, and installing and testing of the bridge's mechanical, electrical, and plumbing systems. The TBPOC's goal is to open the bridge to traffic in both directions by September 2013.

Status: The SAS bike path handrail installation continues, and polyester concrete overlay began in early May. SAS travelers are being tested. PWS cable painting is ongoing. Suspender cleaning, caulking and painting is ongoing. Hinge A pipe beam installation was completed in January 2013, and Hinge A deck rebar installation was completed in May. Electrical, mechanical and piping installation is ongoing. Hinge KE seismic joint installation was completed in early May. SAS east and west anchorage dehumidification installation began in March and was completed in late April. PWS catwalk removal was completed in mid-April.

Architectural Rendering of New Self-Anchored Suspension Span and Skyway

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Self-Anchored Suspension (SAS) Construction Sequence

STEP 1 - CONSTRUCT TEMPORARY SUPPORT STRUCTURES

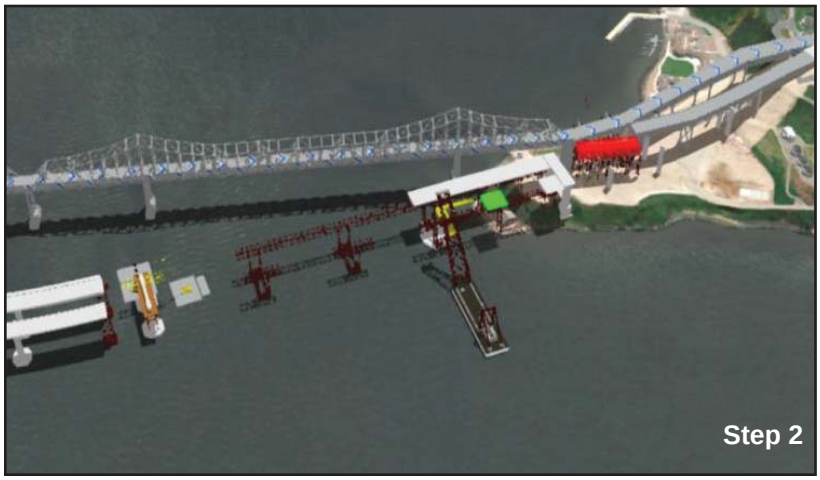
All temporary support foundations and structures were completed between the Skyway and Yerba Buena Island by September 2010 to support the westbound and eastbound roadway box erections.

Status: Removal of the westbound and eastbound temporary support structures foundations will continue through late 2013.

STEP 2 - INSTALL ROADWAYS

All of the 28 steel roadway boxes and 17 crossbeams have been erected as of the end of October 2011.

Status: Mechanical, electrical and piping installation continues with installation of the dehumidifiers in the west loop and east and west anchorage areas. Installation of Hinge A eastbound and westbound seismic joints will be completed in mid-May. Hinge K eastbound and westbound seismic joints were completed in April 2013. Installation of the eastbound bike path belveder and railing continues. Installation of the wind vortex started in March. Lighting poles are being installed on the deck and travelers are installed under the SAS. The bikepath, bridge deck eastbound and westbound are being tested.



STEP 3 - INSTALL TOWER

All tower legs, tower grillage, tower saddle and tower head were erected using the self-rising crane as of mid-August 2012.

Status: Tower base shear-plate electroslag welding and NDT continues. The tower crane and erection framing is being removed and forecast to be completed in May. The tower saddle shroud installation is complete and painting is ongoing.

STEP 4 - MAIN CABLE AND SUSPENDER INSTALLATION

The main cable haul started from the east end of the westbound roadway deck moving over the tower saddle, wrapping around pier W2 west deviation saddles and returning to the tower saddle to the east end of eastbound roadway deck where it is anchored. The cable band and suspender cables were then installed to lift the roadway deck off the temporary support structure.

Status: Cleaning, caulking and painting of the suspenders continues. Catwalk removal was completed in April. Touch-up painting is ongoing.

STEP 5 - WESTBOUND AND EASTBOUND SEISMIC SAFETY OPENING

The new bridge will now open simultaneously in both the westbound and eastbound directions on Labor Day weekend 2013.

Status: The SAS, YBITS#2 and OTD#2 construction activities are ongoing in support of the seismic safety opening scheduled for September 3, 2013. The fix for the shear key bolts are critical for the opening of the bridge on time.

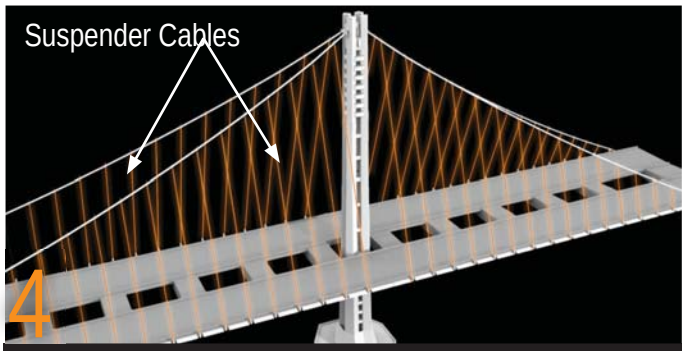
TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Self-Anchored Suspension (SAS) Superstructure Main Cable Completion Activities

CABLE STRAND HAULING

Crews haul the 137 individual steel wire strands that comprise the nearly 1-mile long single main cable. The strands are adjusted and then anchored into the east end of the SAS.

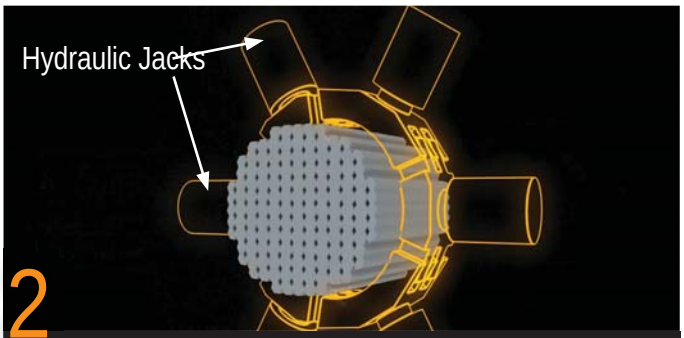
Status: Complete



SUSPENDER CABLES INSTALLATION

Workers begin placing the suspender cables that connect the main cable to the road-decks. Not all of the suspender cables need to be attached before load transfer begins.

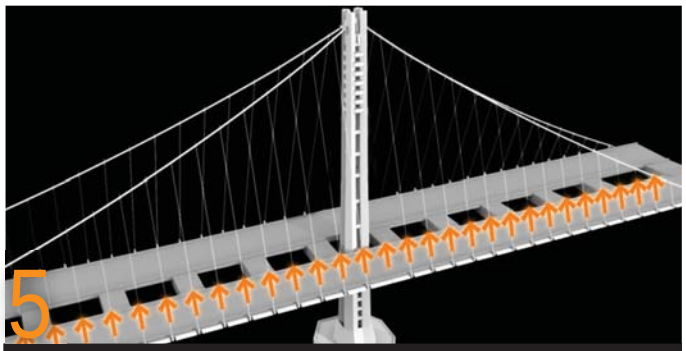
Status: Complete



CABLE STRAND COMPACTING

Four compacting machines containing hydraulic jacks are used to compress the 137 steel wire strands into the shape of the main cable. Temporary bands are placed to maintain the shape.

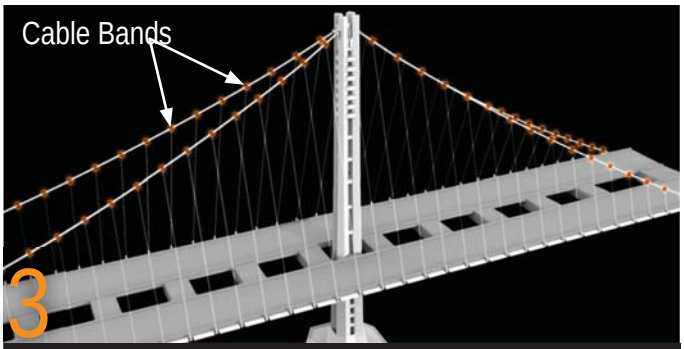
Status: Complete



LOAD TRANSFER (see facing page)

Using the attached suspender cables, crews begin the process of transferring the weight of the span from the temporary supports under the bridge to the main cable.

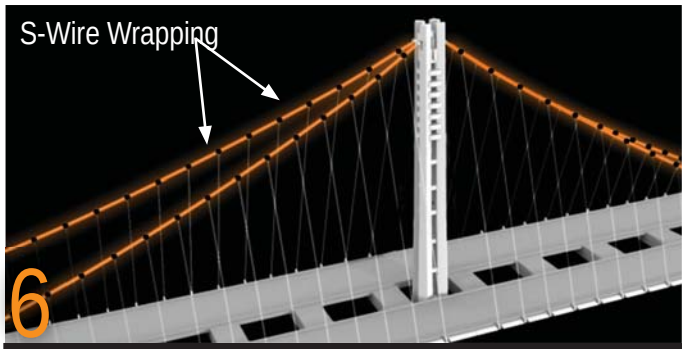
Status: Complete



CABLE BANDS INSTALLATION

Crews installed 114 permanent steel cable bands along the main cable. These bands maintain the shape of the cable, and serve as anchor points for the suspender cables.

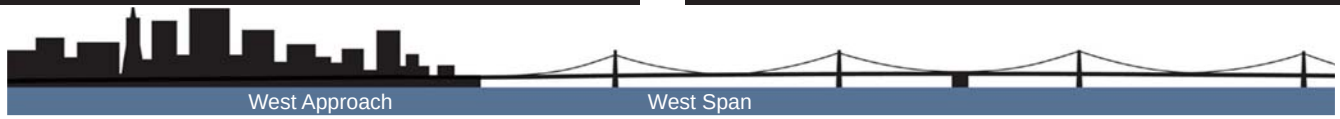
Status: Complete



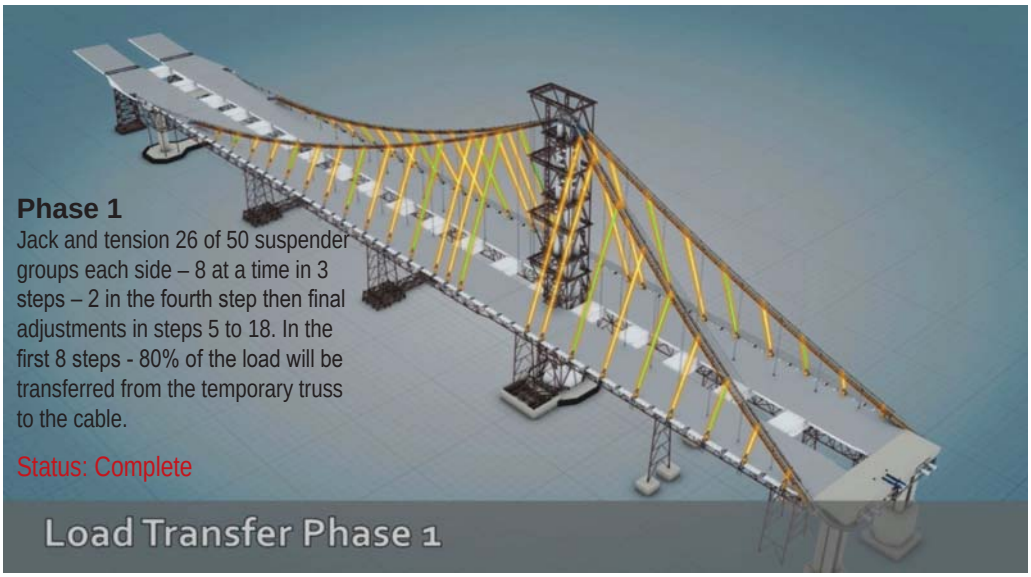
S-WIRE WRAP

After load transfer, the main cable is wrapped in S-wire to protect the cable against corrosion. After the cable is wrapped, it is painted.

Status: Complete



Load Transfer Sequence



Phase 1
Jack and tension 26 of 50 suspender groups each side – 8 at a time in 3 steps – 2 in the fourth step then final adjustments in steps 5 to 18. In the first 8 steps - 80% of the load will be transferred from the temporary truss to the cable.

Status: Complete

Phase 2
Jack and tension 3 more suspender groups out of 50 from each side to bring to a total of 29 of 50 each side.
Status: Complete

Phase 3
Jack and tension final 21 of 50 suspender groups each side to bring total suspenders tensioned to 50 out of 50 each side.
Status: Complete.

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project Skyway

The Skyway, which comprises much of the new East Span, will drastically change the appearance of the Bay Bridge. Replacing the gray steel that currently cages drivers, a graceful, elevated roadway supported by piers will provide sweeping views of the bay.

E Skyway Contract

Contractor: Kiewit/FCI/Manson, Joint Venture
Approved Capital Outlay Budget: $1.24 B
Status: Completed April 2008

Extending for more than a mile across Oakland mudflats, the Skyway is the longest section of the East Span. It sits between the new Self-Anchored Suspension (SAS) span and the Oakland Touchdown. In addition to incorporating the latest seismic-safety technology, the side-by-side roadway decks of the Skyway feature shoulders and lane widths built to modern standards.

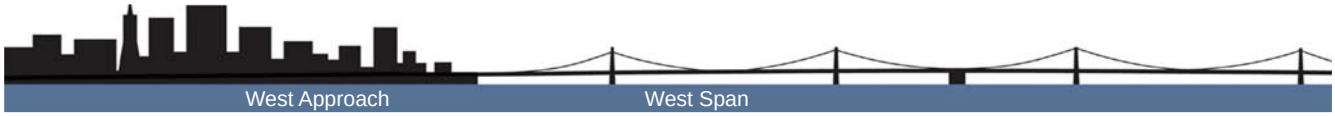
The Skyway's decks are composed of 452 pre-cast concrete segments (standing three stories high), containing approximately 200 million pounds of structural steel, 120 million pounds of reinforcing steel, 200 thousand linear feet of piling and about 450 thousand cubic yards of concrete. These are the largest segments of their kind ever cast and were lifted into place by custom-made winches.

The Skyway marine foundation consists of 160 hollow steel pipe piles measuring eight feet in diameter and dispersed among 14 sets of piers. The 365-ton piles were driven more than 300 feet into the deep bay mud. The new East Span piles were battered or driven in at an angle, rather than vertically, to obtain maximum strength and resistance.

Designed specifically to move during a major earthquake, the Skyway features several state-of-the-art seismic safety innovations, including 60-foot-long hinge pipe beams. These beams will allow deck segments on the Skyway to move, enabling the deck to withstand greater motion and to absorb more earthquake energy.

Status: All light poles will be delivered to the job site and installed by seismic safety opening.

Rendering of the New San Francisco/Oakland Bridge Skyway and Self-Anchored Suspension Bridge



TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Oakland Touchdown

When completed, the Oakland Touchdown (OTD) structures will connect Interstate 80 in Oakland to the side-by-side decks of the new East Span. For westbound drivers, the OTD will be their introduction to the graceful new East Span. For eastbound drivers from San Francisco, this section of the bridge will carry them from the Skyway to the East Bay, offering unobstructed views of the Oakland hills.

The OTD approach structures to the Skyway will be constructed in three phases. The first phase, constructed under the OTD #1 contract, built the new westbound approach structure. Due to physical constraints with the existing bridge, the OTD #1 contract was only able to construct a portion of the eastbound approach. To facilitate opening the bridge in both directions at the same time, the second phase of work, performed by the Oakland Detour contractor, included widening the upper deck of the Oakland end of the existing bridge to allow for a traffic shift to the north that removes the physical constraint to completing the eastbound structure. This phase was completed in April 2012. The third phase, to be constructed by a future OTD #2 contract, will complete the eastbound lanes and provide the traffic switch to the new structure in both directions, thus allowing the bridge to open simultaneously in both directions.

F Oakland Touchdown #1 Contract

Contractor: MCM Construction, Inc.
Approved Capital Outlay Budget: $205.0 M
Status: Completed June 2010

The OTD #1 contract constructed the entire 1,000-foot-long westbound approach from the toll plaza to the Skyway. When open to traffic, the westbound approach structure will provide direct access to the westbound Skyway. In the eastbound direction, the contract constructed a portion of the eastbound structure and all of the eastbound foundations that are not in conflict with the existing bridge.

Status: MCM Construction, Inc. completed OTD #1 westbound and eastbound phase 1 on June 8, 2010.

G Oakland Touchdown #2 Contract

Contractor: Flatiron West, Inc.
Approved Capital Outlay Budget: $62.0 M
Status: 35% Complete as of April 2013

Flatiron West, Inc. is the prime contractor constructing the Oakland Touchdown #2 contract that will complete the remaining portions of the Oakland Touchdown Approach structures from the existing toll plaza to the new span. The contractor is also responsible for the construction of the bike path and final landscaping of the area.

Status: The contractor completed the installation of the roadway deck and is currently working on the approach roadway from the toll plaza. Duct bank conduit excavation and installation continues. Deck seismic joints are currently being installed. All other remaining civil work will be completed in support of the seismic safety opening.

Aerial View of the Eastbound Oakland Touchdown #2 Construction Progress

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Existing East Span Bridge Demolition

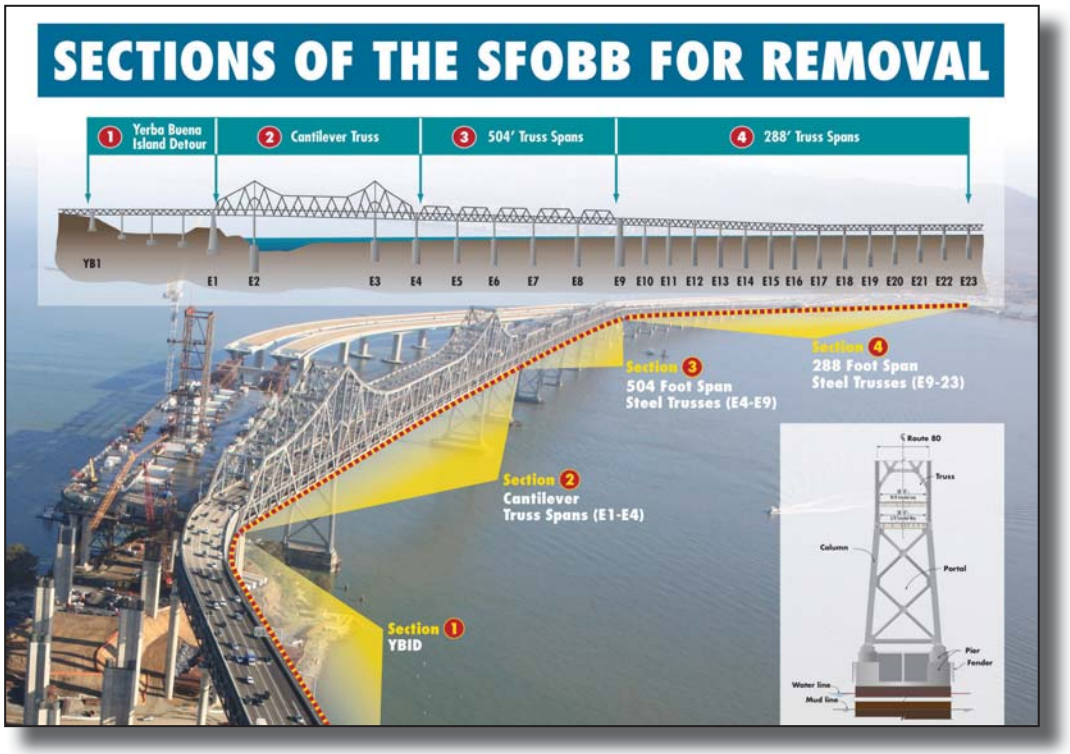
I Existing SFOBB Dismantling Contracts

Approved Capital Outlay Budget: $239.1 M

To expedite the opening of a new eastbound on ramp and the pedestrian/bicycle pathway from Yerba Buena Island to the SAS and to maximize contractor efficiencies, the TBPOC has decided to split the dismantling of the existing bridge into multiple contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge has been incorporated into the YBITS #2 contract. The dismantling of the remaining portions of the bridge will likely be performed under separate superstructure (above water) removal and marine foundation (below water) contracts. These contracts are still in design and may change in scope over time.

Cantilever section of the Original eastbound Bridge Section Included in the YBITS #2 Contract for Removal

Status: The cantilever portion of the demolition contract was awarded to CEC and Silverado (JV) on November 28, 2012. Construction start-up activities began in March 2013, with actual dismantling to begin after seismic safety opening in September 2013. The contractor is in the process of establishing their document control system reviewing RFIs and preparing submittals. Partnering meetings with Caltrans continues. The contractor is working off site on scaffolding to access the cantilever to install bird deterrence measures.



The New San Francisco-Oakland Bay Bridge on left and the Cantilever Section and the Temporary Detour of the Existing Bay Bridge on right

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

San Francisco-Oakland Bay Bridge East Span Replacement Project
Other Contracts

A number of contracts needed to relocate utilities, clear areas of archeological artifacts and prepare areas for future work have already been completed. The last major contract will be the eventual demolition and removal of the existing bridge, which by that time will have served the Bay Area for nearly 80 years. Following is a status of some the other East Span contracts.

J Electrical Cable Relocation

Contractor: Manson Construction
Approved Capital Outlay Budget: $9.6 M
Status: Completed January 2008

A submerged cable from Oakland that is close to where the new bridge will touch down supplies electrical power to Treasure Island. To avoid any possible damage to the cable during construction, two new replacement cables were run from Oakland to Treasure Island. The extra cable was funded by the Treasure Island Development Authority.

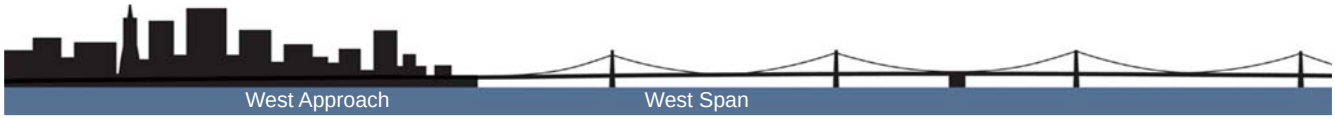
Yerba Buena Island Substation

Contractor: West Bay Builders
Approved Capital Outlay Budget: $11.3 M
Status: Completed May 2005

This contract relocated an electrical substation just east of the Yerba Buena Island Tunnel in preparation for the new East Span.

Archeological Investigations

New YBI Electrical Substation



Stormwater Treatment Measures

Contractor: Diablo Construction, Inc.
Approved Capital Outlay Budget: $18.3 M
Status: Completed December 2008

The Stormwater Treatment Measures contract implemented a number of best practices for the management and treatment of stormwater runoff. Focused on the areas around and approaching the toll plaza, the contract added new drainage and built new bio-retention swales and other related constructs.

Stormwater Retention Basin

East Span Interim Seismic Retrofit

Contractors: 1) California Engineering
2) Balfour Beatty
Approved Capital Outlay Budget: $30.8 M
Status: Completed October 2000

After the 1989 Loma Prieta Earthquake, and before the final retrofit strategy was determined for the East Span, Caltrans completed an interim retrofit of the existing bridge to prevent a catastrophic collapse of the bridge should a similar earthquake occur before the East Span was completely replaced. The interim retrofit was performed under two separate contracts that lengthened pier seats, added some structural members, and strengthened areas of the bridge so they would be more resilient during an earthquake.

Existing East Span Cantilever Section of the San Francisco-Oakland Bay Bridge to be Demolished after Seismic Safety Opening of the New Bridge

Pile Installation Demonstration

Contractor: Manson and Dutra, Joint Venture
Approved Capital Outlay Budget: $9.2 M
Status: Completed December 2000

While large-diameter battered piles are common in offshore drilling, the new East Span is one of the first bridges to use them in its foundations. To minimize project risks and build industry knowledge, a pile installation demonstration project was initiated to prove the efficacy of the proposed technology and methodology. The demonstration was highly successful and helped result in zero contract change orders or claims for pile driving on the project.

Battered Pile Installation Demonstration

TOLL BRIDGE SEISMIC RETROFIT PROGRAM

Dumbarton Bridge Seismic Retrofit Project

Contractor: Shimmick Construction Company, Inc.

Approved Capital Outlay Budget: $92.7 M

Status: 99% Complete as of April 2013

The current Dumbarton Bridge was opened to traffic in 1982 linking the cities of Newark in Alameda County and East Palo Alto in San Mateo County. The 1.6-mile long bridge has six lanes (three in each direction) and an eight-foot-wide bicycle/pedestrian pathway. The bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast-prestressed concrete delta girders and steel box girders supported on reinforced concrete piers. The current retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings.

Ravenswood Pier Pile Removal

Status: The main bridge structure between piers 16 through 31 is being raised approximately five inches in order for isolation bearings to be installed to separate the superstructure from the substructure during seismic events. In preparation, the bridge piers have been widened with reinforced concrete to accommodate the new bearings.

Along the reinforced concrete slab approaches, the bent caps have been extended and tied to new 48-inch diameter steel piles that have been installed to strengthen the bridge. Bent cap extensions along the east and west trestle approach are now complete.

Concrete has been placed and installation of jacking frames is complete at all of the 16 piers. The isolation bearing installation is complete at all piers. The bridge is now fully supported by the new bearings at all locations.

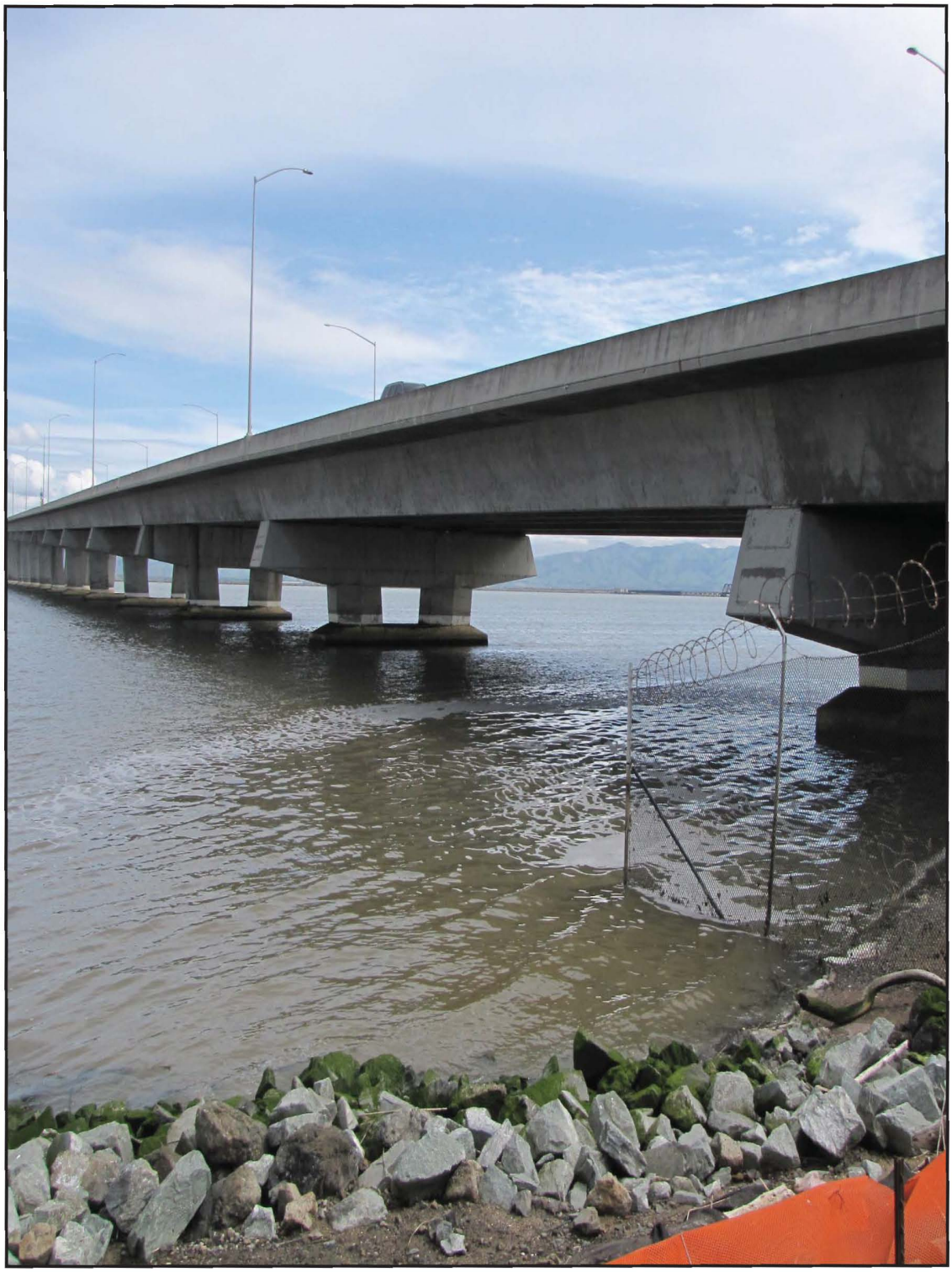
Work at the pumping plant is substantially complete. Fender rehabilitation work is ongoing at piers 23 and 24. Pier footing overlay concrete has been placed at piers 17 through 30. Removal of all 63 spans of the Ravenswood Pier has been completed.

The Dumbarton Bridge was closed to traffic for the second time in 2012 during the Labor Day weekend. A full bridge closure was necessary in order for crews to replace the existing expansion joint on the eastern side of the bridge at Pier 31 with a state-of-the-art seismic joint. Seismic retrofit of hinge 21 and 25 is complete.

Bollards around Pump Station

Installation of the Seismic Monitoring System and the rerouting of all electrical systems at pier 31 is ongoing.

New curb, gutter and paving of the frontage roads along the bridge approach is complete.



Dumbarton Bridge

TOLL BRIDGE SEISMIC RETROFIT PROGRAM
Other Completed Projects

In the 1990s, the State Legislature identified seven of the nine state-owned toll bridges for seismic retrofit. In addition to the San Francisco-Oakland Bay Bridge, these included the Benicia-Martinez, Carquinez, Richmond-San Rafael and San Mateo-Hayward bridges in the Bay Area, and the Vincent Thomas and Coronado bridges in Southern California. Other than the East Span of the Bay Bridge, the retrofits of all of the bridges have been completed as planned.

High-Rise Section of San Mateo-Hayward Bridge

San Mateo-Hayward Bridge Seismic Retrofit Project
Project Status: Completed 2000

The San Mateo-Hayward Bridge seismic retrofit project focused on strengthening the high-rise portion of the span. The foundations of the bridge were significantly upgraded with additional piles.

1958 Carquinez Bridge (foreground) with the 1927 Span (middle) under Demolition and the New Alfred Zampa Memorial Bridge (background)

1958 Carquinez Bridge Seismic Retrofit Project
Project Status: Completed 2002

The eastbound 1958 Carquinez Bridge was retrofitted in 2002 with additional reinforcement of the cantilever thru-truss structure.

1962 Benicia-Martinez Bridge Seismic Retrofit Project
Project Status: Completed 2003

The southbound 1962 Benicia-Martinez Bridge was retrofitted to “Lifeline” status with the strengthening of the foundations and columns and the addition of seismic bearings that allow the bridge to move during a major seismic event. The Lifeline status means the bridge is designed to sustain minor to moderate damage after a seismic event and to reopen quickly to emergency response traffic.

1962 Benicia-Martinez Bridge (right)

Richmond-San Rafael Bridge Seismic Retrofit Project
Project Status: Completed 2005

The Richmond-San Rafael Bridge was retrofitted to a "No Collapse" classification to avoid catastrophic failure during a major seismic event. The foundations, columns, and truss of the bridge were strengthened, and the entire low-rise approach viaduct from Marin County was replaced.

Richmond-San Rafael Bridge

Los Angeles-Vincent Thomas Bridge Seismic Retrofit Project
Project Status: Completed 2000

The Vincent Thomas Bridge is a 1,500-foot long suspension bridge crossing the Los Angeles Harbor in Los Angeles that links San Pedro with Terminal Island. The bridge was one of two state-owned toll bridges in Southern California (the other being the San Diego-Coronado Bridge). Opened in 1963, the bridge was seismically retrofitted as part of the TBSRP in 2000.

Los Angeles-Vincent Thomas Bridge

San Diego-Coronado Bridge Seismic Retrofit Project
Project Status: Completed 2002

The San Diego-Coronado Bridge crosses over San Diego Bay and links the cities of San Diego and Coronado. Opened in 1969, the 2.1-mile long bridge was seismically retrofitted as part of the TBSRP in 2002.

Antioch Bridge Seismic Retrofit Project
Project Status: Completed 2012

Serving the Delta region of the Bay Area, the Antioch Bridge takes State Route 160 traffic over the San Joaquin River, linking eastern Contra Costa County with Sacramento County. The current 1.8-mile-long steel plate girder bridge was opened in 1978 with one lane in each direction. The major retrofit measure for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents, and installing steel casings at all columns located at the Sherman Island approach slab bridge.

Antioch Bridge

Aerial View of New Alfred Zampa memorial (Carrquinez) Bridge

REGIONAL MEASURE 1 TOLL BRIDGE PROGRAM

REGIONAL MEASURE 1 PROGRAM

Completed Projects

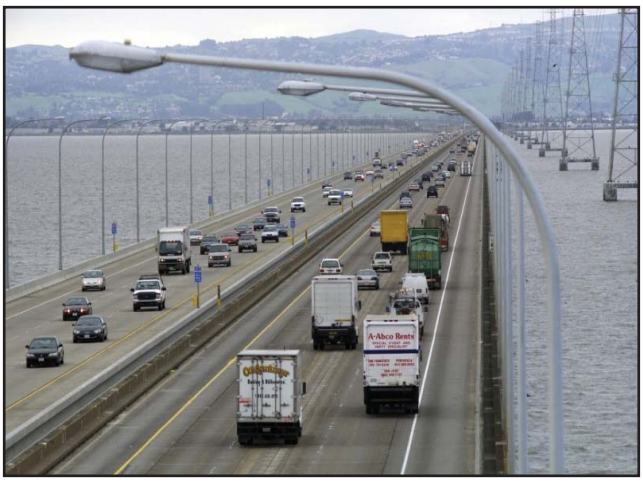
In November 1988, Bay Area voters approved Regional Measure 1 (RM 1), which authorized a standard auto toll of $1 for all seven state-owned Bay Area toll bridges to be used to reduce congestion in the bridge corridor.

Richmond Parkway Construction Project
Project Status: Completed 2001

The final connections to the Richmond Parkway from Interstate 580 near the Richmond-San Rafael Bridge were completed in May 2001.

San Mateo-Hayward Bridge Widening Project
Project Status: Completed 2003

This project expanded the low-rise concrete trestle section of the San Mateo-Hayward Bridge to allow for three lanes in each direction to match the existing configuration of the high-rise steel section of the bridge.



Widening of the San Mateo-Hayward Bridge Trestle on left

New Alfred Zampa Memorial (Carquinez) Bridge Project
Project Status: Completed 2003

The new western span of the Carquinez Bridge, which replaced the original 1927 span, is a twin-towered suspension bridge with three mixed-flow lanes, a new carpool lane, shoulders and a bicycle/pedestrian pathway.

New Alfred Zampa Memorial (Carquinez) Bridge Soon after Opening to Traffic, with Crockett Interchange Still under Construction

Bayfront Expressway (State Route 84) Widening Project
Project Status: Completed 2004

This project expanded and improved the roadway from the Dumbarton Bridge touchdown to the US 101/ Marsh Road interchange by adding additional lanes and turn pockets and improving bicycle/pedestrian access in the area.

Richmond-San Rafael Bridge Rehabilitation Projects
Project Status: Completed 2006

Three major rehabilitation projects for the Richmond-San Rafael Bridge were completed. In 2001, the final connections to the Richmond Parkway were completed. In 2005, seismic retrofit, trestle and fender system replacement work was completed. In 2006, the bridge was resurfaced along with deck joint repairs.

New Richmond-San Rafael Bridge West Approach Trestle under Construction

Benicia-Martinez Bridge Project
Project Status: Completed 2007

The new Congressman George Miller Bridge opened to traffic in August 2007, taking its place alongside the existing 1962 Benicia-Martinez Bridge, which is named for Congressman Miller's father, the late George Miller, Jr. The new bridge carries five lanes of northbound Interstate 680 traffic, while the existing bridge is being upgraded to carry four lanes of southbound traffic and a new bicycle/pedestrian pathway.

The New Congressman George Miller Bridge (New Benicia-Martinez Bridge

Benicia-Martinez Bridge Rehabilitation Project
Project Status: Completed 2009

A two-year project to rehabilitate and reconfigure the original Benicia-Martinez Bridge began shortly after the opening of the new Congressman George Miller Bridge. The existing 1.2-mile roadway surface on the steel deck truss bridge was modified to carry four lanes of southbound traffic (one more than before) - with shoulders on both sides - plus a bicycle/pedestrian path on the west side of the span that connects to Park Road in Benicia and to Marina Vista Boulevard in Martinez. Reconstruction of the east side of the bridge and approaches was completed in August 2008. Reconstruction of the west side of the bridge and its approaches and construction of the bicycle/pedestrian pathway were completed in August 2009.

Benicia-Martinez Bridge Bicycle/Pedestrian Path

Interstate 880/State Route 92
Project Status: Completed 2011

This corridor was consistently one of the Bay Area's most congested during the evening commute. This was due in part to the lane merging and weaving that was required by the then-existing cloverleaf interchange. The new interchange features direct freeway-to-freeway connector ramps that now increase traffic capacity and improve overall safety and traffic operations in the area. With the new direct-connector ramps, drivers coming off of the San Mateo-Hayward Bridge can access Interstate 880 without having to compete with traffic headed onto east Route 92 from south Interstate 880.

Aerial View of Completed 880/92 Interchange Project

San Francisco-Oakland Bay Bridge Self-Anchored
Suspension Span Erection of the eastbound Traveler

APPENDICES

Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
SFOBB East Span Replacement Project						
Capital Outlay Support	959.3	262.3	1,221.6	1,132.4	1,279.4	57.8
Capital Outlay Construction	4,492.2	571.5	5,063.7	4,363.1	5,102.7	39.0
Other Budgeted Capital	35.1	(32.8)	2.3	0.7	7.7	5.4
Total	5,486.6	801.0	6,287.6	5,496.2	6,389.8	102.2
SFOBB West Approach Replacement						
Capital Outlay Support	120.0	(1.0)	119.0	119.3	119.3	0.3
Capital Outlay Construction	309.0	41.7	350.7	331.9	338.1	(12.6)
Total	429.0	40.7	469.7	451.2	457.4	(12.3)
SFOBB West Span Retrofit						-
Capital Outlay Support	75.0	(0.2)	74.8	74.9	74.8	-
Capital Outlay Construction	232.9	(5.5)	227.4	227.4	227.4	-
Total	307.9	(5.7)	302.2	302.3	302.2	-
Richmond-San Rafael Bridge Retrofit						
Capital Outlay Support	134.0	(7.0)	127.0	126.8	127.0	-
Capital Outlay Construction	780.0	(90.5)	689.5	667.5	689.5	-
Total	914.0	(97.5)	816.5	794.3	816.5	-
Benicia-Martinez Bridge Retrofit						-
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
Total	177.8	-	177.8	177.8	177.8	-
Carquinez Bridge Retrofit						
Capital Outlay Support	28.7	0.1	28.8	28.8	28.8	-
Capital Outlay Construction	85.5	(0.1)	85.4	85.4	85.4	-
Total	114.2	-	114.2	114.2	114.2	-
San Mateo-Hayward Retrofit						-
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	(0.1)	135.3	135.3	135.3	-
Total	163.5	(0.1)	163.4	163.4	163.4	-
Vincent Thomas Bridge Retrofit (Los Angeles)						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	(0.1)	42.0	42.0	42.0	-
Total	58.5	(0.1)	58.4	58.4	58.4	-
San Diego-Coronado Bridge Retrofit						
Capital Outlay Support	33.5	(0.3)	33.2	33.2	33.2	-
Capital Outlay Construction	70.0	(0.6)	69.4	69.4	69.4	-
Total	103.5	(0.9)	102.6	102.6	102.6	-

Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Antioch Bridge						
Capital Outlay Support	-	31.0	31.0	17.3	23.8	(7.2)
Capital Outlay Support by BATA				6.2		
Capital Outlay Construction	-	51.0	51.0	47.0	50.3	(0.7)
Total	-	82.0	82.0	70.5	74.1	(7.9)
Dumbarton Bridge						
Capital Outlay Support	-	56.0	56.0	37.3	45.4	(10.6)
Capital Outlay Support by BATA				6.0		
Capital Outlay Construction	-	92.7	92.7	62.8	69.5	(23.2)
Total	-	148.7	148.7	106.1	114.9	(33.8)
Subtotal Capital Outlay Support	1,433.1	340.9	1,774.0	1,664.8	1,814.3	40.3
Subtotal Capital Outlay	6,286.8	660.0	6,946.8	6,171.5	6,949.3	2.5
Subtotal Other Budgeted Capital	35.1	(32.8)	2.3	0.7	7.7	5.4
Miscellaneous Program Costs	30.0	-	30.0	25.5	30.0	-
Subtotal Toll Bridge Seismic Retrofit Program	7,785.0	968.1	8,753.1	7,862.5	8,801.3	48.2
Net Programmatic Risks*	-	-	-	-	32.6	32.6
Program Contingency	900.0	(571.1)	328.9	-	206.5	(122.4)
Total Toll Bridge Seismic Retrofit Program [1]	8,685.0	397.0	9,082.0	7,862.5	9,040.4	(41.6)

[1] Figures may not sum up to totals due to rounding effects.

Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances **as of 04/2013 see Note (1)**	Estimated costs not yet spent or encumbered as **of 04/2013**	Total Forecast as **of 04/2013**
a	b	c	d	e	f = d + e
Other Completed Projects					
Capital Outlay Support	144.9	144.6	144.6	-	144.6
Capital Outlay	472.6	471.9	472.8	(1.0)	471.8
Total	617.5	616.5	617.4	(1.0)	616.4
Richmond-San Rafael					
Capital Outlay Support	134.0	127.0	126.8	0.2	127.0
Capital Outlay	698.0	689.5	667.5	22.0	689.5
Project Reserves	82.0	-	-	-	-
Total	914.0	816.5	794.3	22.2	816.5
West Span Retrofit					
Capital Outlay Support	75.0	74.8	74.9	(0.1)	74.8
Capital Outlay	232.9	227.4	232.9	(5.5)	227.4
Total	307.9	302.2	307.8	(5.6)	302.2
West Approach					
Capital Outlay Support	120.0	119.0	119.3	-	119.3
Capital Outlay	309.0	350.7	346.8	(8.7)	338.1
Total	429.0	469.7	466.1	(8.7)	457.4
SFOBB East Span - Skyway					
Capital Outlay Support	197.0	181.2	181.2	-	181.2
Capital Outlay	1,293.0	1,237.2	1,237.3	(0.1)	1,237.2
Total	1,490.0	1,418.4	1,418.5	(0.1)	1,418.4
SFOBB East Span - SAS - Superstructure					
Capital Outlay Support	214.6	419.0	433.4	47.8	474.6
Capital Outlay	1,753.7	2,046.8	1,963.4	95.9	2,059.3
Total	1,968.3	2,465.8	2,396.8	143.7	2,533.9
SFOBB East Span - SAS - Foundations					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	301.3	301.3	3.8	305.1
Total	402.4	338.9	338.9	3.8	342.7
Small YBI Projects					
Capital Outlay Support	10.6	10.2	10.2	0.4	10.6
Capital Outlay	15.6	15.2	15.2	0.5	15.7
Total	26.2	25.4	25.4	0.9	26.3
YBI Detour					
Capital Outlay Support	29.5	87.7	87.9	(0.2)	87.7
Capital Outlay	131.9	466.1	492.9	(19.5)	473.3
Total	161.4	553.8	580.8	(19.7)	561.0
YBI- Transition Structures					
Capital Outlay Support	78.7	106.4	98.3	18.3	114.0
Capital Outlay	299.4	295.4	332.9	(24.9)	308.0
Total	378.1	401.8	431.2	(6.6)	422.0

Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions) Cont.

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances **as of 04/2013 see Note (1)**	Estimated costs not yet spent or encumbered as of **04/2013**	Total Forecast **as of 04/2013**
a	b	c	d	e	f = d + e
Oakland Touchdown					
Capital Outlay Support	74.4	112.9	105.2	18.6	122.4
Capital Outlay	283.8	323.7	276.5	47.0	323.4
Total	358.2	436.6	381.7	65.6	445.8
East Span Other Small Projects					
Capital Outlay Support	212.3	206.6	197.9	8.7	206.6
Capital Outlay	170.8	141.3	118.4	36.3	154.7
Total	383.1	347.9	316.3	45.0	361.3
Existing Bridge Demolition					
Capital Outlay Support	79.7	59.9	4.5	40.5	44.7
Capital Outlay	239.2	239.1	-	233.7	233.7
Total	318.9	299.0	4.5	274.2	278.4
Antioch Bridge					
Capital Outlay Support	-	31.0	17.3	0.3	17.6
Capital Outlay Support by BATA			6.2	-	6.2
Capital Outlay	-	51.0	47.4	2.9	50.3
Total	-	82.0	70.9	3.2	74.1
Dumbarton Bridge					
Capital Outlay Support	-	56.0	37.5	2.5	39.4
Capital Outlay Support by BATA			6.0	-	6.0
Capital Outlay	-	92.7	68.3	1.2	69.5
Total	-	148.7	111.8	3.7	114.9
Miscellaneous Program Costs	30.0	30.0	25.5	4.5	30.0
Total Capital Outlay Support	1,463.2	1,803.9	1,714.3	141.5	1,844.3
Total Capital Outlay	6,321.8	6,949.2	6,573.6	383.6	6,957.0
Program Total [1]	7,785.0	8,753.1	8,287.9	525.1	8,801.3

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.
(2). BSA provided a distribution of program contingency in December 2004 based in Bechtel Infrastructure Corporation input. This Column is subject to revision upon completion of Department's risk assessment update.
(3) Total Capital Outlay Support includes program indirect costs.

[1] Figures may not sum up to totals due to rounding effects.

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project						
East Span - SAS Superstructure						
Capital Outlay Support	214.6	204.4	419.0	419.3	474.6	55.6
Capital Outlay Construction	1,753.7	293.1	2,046.8	1,794.2	2,059.3	12.5
Total	1,968.3	497.5	2,465.8	2,213.5	2,533.9	68.1
SAS W2 Foundations						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	0.1	26.5	26.5	26.5	-
Total	36.4	(0.7)	35.7	35.7	35.7	-
YBI South/South Detour						
Capital Outlay Support	29.4	58.3	87.7	87.9	87.7	-
Capital Outlay Construction	131.9	334.2	466.1	466.1	473.3	7.2
Total	161.3	392.5	553.8	554.0	561.0	7.2
East Span - Skyway						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(55.8)	1,237.2	1,237.3	1,237.2	-
Total	1,490.0	(71.6)	1,418.4	1,418.5	1,418.4	-
East Span - SAS E2/T1 Foundations						-
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(38.7)	274.8	274.8	278.6	3.8
Total	366.0	(62.8)	303.2	303.2	307.0	3.8
YBI Transition Structures (see notes below)						
Capital Outlay Support	78.7	27.7	106.4	92.5	114.0	7.6
Capital Outlay Construction	299.3	(3.9)	295.4	175.8	308.0	12.6
Total	378.0	23.8	401.8	268.3	422.0	20.2
* YBI- Transition Structures						
Capital Outlay Support			16.4	16.4	16.4	-
Capital Outlay Construction			-	-	-	-
Total			16.4	16.4	16.4	-
* YBI- Transition Structures Contract No. 1						
Capital Outlay Support			57.0	58.6	63.6	6.6
Capital Outlay Construction			199.7	172.7	213.7	14.0
Total			256.7	231.3	277.3	20.6
* YBI- Transition Structures Contract No. 2						
Capital Outlay Support			32.0	17.5	33.0	1.0
Capital Outlay Construction			92.4	3.1	91.0	(1.4)
Total			124.4	20.6	124.0	(0.4)
* YBI- Transition Structures Contract No. 3 Landscape						
Capital Outlay Support			1.0	-	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
Total			4.3	-	4.3	-

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Oakland Touchdown (see notes below)						
Capital Outlay Support	74.4	38.5	112.9	101.3	122.4	9.5
Capital Outlay Construction	283.8	39.9	323.7	256.4	323.4	(0.3)
Total	358.2	78.4	436.6	357.7	445.8	9.2
* OTD Prior-to-Split Costs						
Capital Outlay Support			21.7	20.0	21.7	-
Capital Outlay Construction			-	-	-	-
Total			21.7	20.0	21.7	-
* OTD Submarine Cable(1)						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			5.7	5.7	9.6	3.9
Total			6.6	6.6	10.5	3.9
* OTD No. 1 (Westbound)						
Capital Outlay Support			51.3	51.2	51.3	-
Capital Outlay Construction			205.0	204.8	203.3	(1.7)
Total			256.3	256.0	254.6	(1.7)
* OTD No. 2 (Eastbound)						
Capital Outlay Support			22.5	21.7	39.8	17.3
Capital Outlay Construction			62.0	18.2	66.1	4.1
Total			84.5	39.9	105.9	21.4
* OTD Touchdown 2 Detour(2)						
Capital Outlay Support			15.0	6.8	7.2	(7.8)
Capital Outlay Construction			51.0	27.7	44.4	(6.6)
Total			66.0	34.5	51.6	(14.4)
* OTD Electrical Systems						
Capital Outlay Support			1.5	0.8	1.5	-
Capital Outlay Construction			-	-	-	-
Total			1.5	0.8	1.5	-
Existing Bridge Demolition						
Capital Outlay Support	79.7	(19.8)	59.9	4.5	44.7	(15.2)
Capital Outlay Construction	239.2	(0.1)	239.1	-	233.7	(5.4)
Total	318.9	(19.9)	299.0	4.5	278.4	(20.6)
* Bridge Demolition Prior-to-Split Cost						
Capital Outlay Support			-	3.9	-	
Capital Outlay Construction			-	-	-	
Total			-	3.9	-	
* Cantilever Section						
Capital Outlay Support			-	0.1	16.8	
Capital Outlay Construction			-	-	60.3	
Total			-	0.1	77.1	
* 504/288 Sections						
Capital Outlay Support			-	0.4	13.9	
Capital Outlay Construction			-	-	88.4	
Total			-	0.4	102.3	
*Marine foundations						
Capital Outlay Support			-	0.1	14.0	
Capital Outlay Construction			-	-	85.0	
Total			-	0.1	99.0	

Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through April 30, 2013 ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
YBI/SAS Archeology						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
Total	2.2	-	2.2	2.2	2.2	-
YBI - USCG Road Relocation						
Capital Outlay Support	3.0	(0.3)	2.7	2.7	3.0	0.3
Capital Outlay Construction	3.0	(0.2)	2.8	2.8	3.0	0.2
Total	6.0	(0.5)	5.5	5.5	6.0	0.5
YBI - Substation and Viaduct						
Capital Outlay Support	6.5	(0.1)	6.4	6.4	6.5	0.1
Capital Outlay Construction	11.6	(0.3)	11.3	11.3	11.6	0.3
Total	18.1	(0.4)	17.7	17.7	18.1	0.4
Oakland Geofill						-
Capital Outlay Support	2.5	0.1	2.6	2.5	2.5	(0.1)
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
Total	10.7	0.1	10.8	10.7	10.7	(0.1)
Pile Installation Demonstration Project						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.3	(0.1)	9.2	9.3	9.3	-
Total	11.1	(0.1)	11.0	11.1	11.1	-
Stormwater Treatment Measures						
Capital Outlay Support	6.0	2.2	8.2	8.2	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.8	18.3	-
Total	21.0	5.5	26.5	25.0	26.5	-
Right-of-Way and Environmental Mitigation						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	51.7	80.4	8.0
Total	72.4	-	72.4	51.7	80.4	8.0
Sunk Cost - Existing East Span Retrofit						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
Total	70.3	-	70.3	70.3	70.3	-
Other Capital Outlay Support						
Environmental Phase	97.7	0.1	97.8	97.8	97.7	(0.1)
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-Project Specific Costs	20.0	(8.0)	12.0	3.2	12.0	-
Total	162.6	(7.9)	154.7	145.9	154.6	(0.1)
Subtotal Capital Outlay Support	959.3	262.3	1,221.6	1,132.4	1,279.4	57.8
Subtotal Capital Outlay Construction	4,492.2	571.5	5,063.7	4,363.1	5,102.7	39.0
Other Budgeted Capital	35.1	(32.8)	2.3	0.7	7.7	5.4
						-
Total SFOBB East Span Replacement Project	5,486.6	801.0	6,287.6	5,496.2	6,389.8	102.2

[1] Figures may not sum up to totals due to rounding effects.

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project						
New Bridge						
Capital Outlay Support						
BATA Funding	84.9	7.2	92.1	92.0	92.1	-
Non-BATA Funding	-	0.1	0.1	0.1	0.1	-
Subtotal	84.9	7.3	92.2	92.1	92.2	-
Capital Outlay Construction			-			-
BATA Funding	661.9	94.6	756.5	753.7	756.5	-
Non-BATA Funding	10.1	-	10.1	10.1	10.1	-
Subtotal	672.0	94.6	766.6	763.8	766.6	-
Total	756.9	101.9	858.8	855.9	858.8	-
I-680/I-780 Interchange Reconstruction						
Capital Outlay Support						
BATA Funding	24.9	5.2	30.1	30.1	30.1	-
Non-BATA Funding	1.4	5.2	6.6	6.3	6.6	-
Subtotal	26.3	10.4	36.7	36.4	36.7	-
Capital Outlay Construction						
BATA Funding	54.7	26.9	81.6	77.1	81.6	-
Non-BATA Funding	21.6	-	21.6	21.7	21.7	0.1
Subtotal	76.3	26.9	103.2	98.8	103.3	0.1
Total	102.6	37.3	139.9	135.2	140.0	0.1
I-680/Marina Vista Interchange Reconstruction						
Capital Outlay Support	18.3	1.9	20.2	20.2	20.2	-
Capital Outlay Construction	51.5	4.9	56.4	56.1	56.4	-
Total	69.8	6.8	76.6	76.3	76.6	-
New Toll Plaza and Administration Building						
Capital Outlay Support	11.9	3.8	15.7	15.7	15.7	-
Capital Outlay Construction	24.3	2.0	26.3	25.1	26.3	-
Total	36.2	5.8	42.0	40.8	42.0	-
Existing Bridge & Interchange Modifications						
Capital Outlay Support						
BATA Funding	4.3	13.7	18.0	18.0	18.0	-
Non-BATA Funding	-	0.9	0.9	0.8	0.9	-
Subtotal	4.3	14.6	18.9	18.8	18.9	-
Capital Outlay Construction						
BATA Funding	17.2	32.8	50.0	37.2	50.0	-
Non-BATA Funding	-	9.5	9.5	-	9.5	-
Subtotal	17.2	42.3	59.5	37.2	59.5	-
Total	21.5	56.9	78.4	56.0	78.4	-
Other Contracts						
Capital Outlay Support	11.4	(0.9)	10.5	9.7	10.5	-
Capital Outlay Construction	20.3	3.3	23.6	18.6	23.6	-
Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Total	52.1	2.3	54.4	45.3	54.4	-

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project continued...						
Subtotal BATA Capital Outlay Support	155.7	30.9	186.6	185.7	186.6	-
Subtotal BATA Capital Outlay Construction	829.9	164.5	994.4	967.8	994.4	-
Subtotal Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Subtotal Non-BATA Capital Outlay Support	1.4	6.2	7.6	7.2	7.6	-
Subtotal Non-BATA Capital Outlay Construction	31.7	9.5	41.2	31.8	41.3	0.1
Project Reserves	20.8	1.6	22.4	-	22.3	(0.1)
Total New Benicia-Martinez Bridge Project	1,059.9	212.6	1,272.5	1,209.5	1,272.5	-
Notes:	Includes EAs 00601_,00603_,00605_,00606_,00608_,00609_,0060A_,0060C_,0060E_,0060F_,0060G_,0060H_, and all Project Right-of-Way					
Carquinez Bridge Replacement Project						
New Bridge						
Capital Outlay Support	60.5	(0.3)	60.2	60.2	60.2	-
Capital Outlay Construction	253.3	2.7	256.0	255.9	256.0	-
Total	313.8	2.4	316.2	316.1	316.2	-
Crockett Interchange Reconstruction						
Capital Outlay Support	32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction	73.9	(1.9)	72.0	71.9	72.0	-
Total	105.9	(2.0)	103.9	103.8	103.9	-
Existing 1927 Bridge Demolition						
Capital Outlay Support	16.1	(0.3)	15.8	15.8	15.8	-
Capital Outlay Construction	35.2	-	35.2	35.1	35.2	-
Total	51.3	(0.3)	51.0	50.9	51.0	-
Other Contracts						
Capital Outlay Support	15.8	0.9	16.7	16.5	16.7	-
Capital Outlay Construction	18.8	(1.2)	17.6	16.5	17.6	-
Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Total	45.1	(0.4)	44.7	42.9	44.7	-
Subtotal BATA Capital Outlay Support	124.4	0.2	124.6	124.4	124.6	-
Subtotal BATA Capital Outlay Construction	381.2	(0.4)	380.8	379.4	380.8	-
Subtotal Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Project Reserves	12.1	(9.7)	2.4	-	2.4	-
Total Carquinez Bridge Replacement Project [1]	528.2	(10.0)	518.2	513.7	518.2	-
Notes	Other Contracts include EAs 01301_,01302_,01303_,01304_,01305_,01306_,01307_,01308_,01309_,0130A_,0130C_,0130D_,0130F_,0130G_,0130H_,0130J_,00453_,00493_,04700_,00607_,2A270_,and 29920_ and all Project Right-of-Way					

[1] Figures may not sum up to totals due to rounding effects.

Appendix C: Regional Measure 1 Program Cost Detail ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
Richmond-San Rafael Bridge Trestle. Fender, and Deck Joint Rehabilitation						
Capital Outlay Support						
BATA Funding	2.2	(0.8)	1.4	1.4	1.4	-
Non-BATA Funding	8.6	1.8	10.4	10.4	10.4	-
Subtotal	10.8	1.0	11.8	11.8	11.8	-
Capital Outlay Construction						
BATA Funding	40.2	(6.8)	33.4	33.3	33.4	-
Non-BATA Funding	51.1	-	51.1	51.1	51.1	-
Subtotal	91.3	(6.8)	84.5	84.4	84.5	-
Project Reserves	-	0.8	0.8	-	0.8	-
Total	102.1	(5.0)	97.1	96.2	97.1	-
Richmond-San Rafael Bridge Deck Overlay Rehabilitation						
Capital Outlay Support						
BATA Funding	4.0	(0.7)	3.3	3.3	3.3	-
Non-BATA Funding	4.0	(4.0)	-	-	-	-
Subtotal	8.0	(4.7)	3.3	3.3	3.3	-
Capital Outlay Construction	16.9	(0.6)	16.3	16.4	16.3	-
Project Reserves	0.1	0.3	0.4	-	0.4	-
Total	25.0	(5.0)	20.0	19.7	20.0	-
Richmond Parkway Project (RM 1 Share Only)						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	5.9	-	5.9	4.3	5.9	-
Total	5.9	-	5.9	4.3	5.9	-
San Mateo-Hayward Bridge Widening						
Capital Outlay Support	34.6	(0.5)	34.1	34.1	34.1	-
Capital Outlay Construction	180.2	(6.1)	174.1	174.1	174.1	-
Capital Outlay Right-of-Way	1.5	(0.9)	0.6	0.6	0.6	-
Project Reserves	1.5	(0.5)	1.0	-	1.0	-
Total	217.8	(8.0)	209.8	208.8	209.8	-
I-880/SR-92 Interchange Reconstruction						
Capital Outlay Support	28.8	35.8	64.6	62.2	64.6	-
Capital Outlay Construction						
BATA Funding	85.2	68.4	153.6	150.2	153.6	-
Non-BATA Funding	9.6	-	9.6	-	9.6	-
Subtotal	94.8	68.4	163.2	150.2	163.2	-
Capital Outlay Right-of-Way	9.9	7.3	17.2	15.4	17.2	-
Project Reserves	0.3	(0.3)	-	-	-	-
Total	133.8	111.2	245.0	227.8	245.0	-
Bayfront Expressway Widening						
Capital Outlay Support	8.6	(0.2)	8.4	8.4	8.4	-
Capital Outlay Construction	26.5	(1.5)	25.0	24.9	25.0	-
Capital Outlay Right-of-Way	0.2	-	0.2	0.2	0.2	-
Project Reserves	0.8	(0.3)	0.5	-	0.5	-
Total	36.1	(2.0)	34.1	33.5	34.1	-

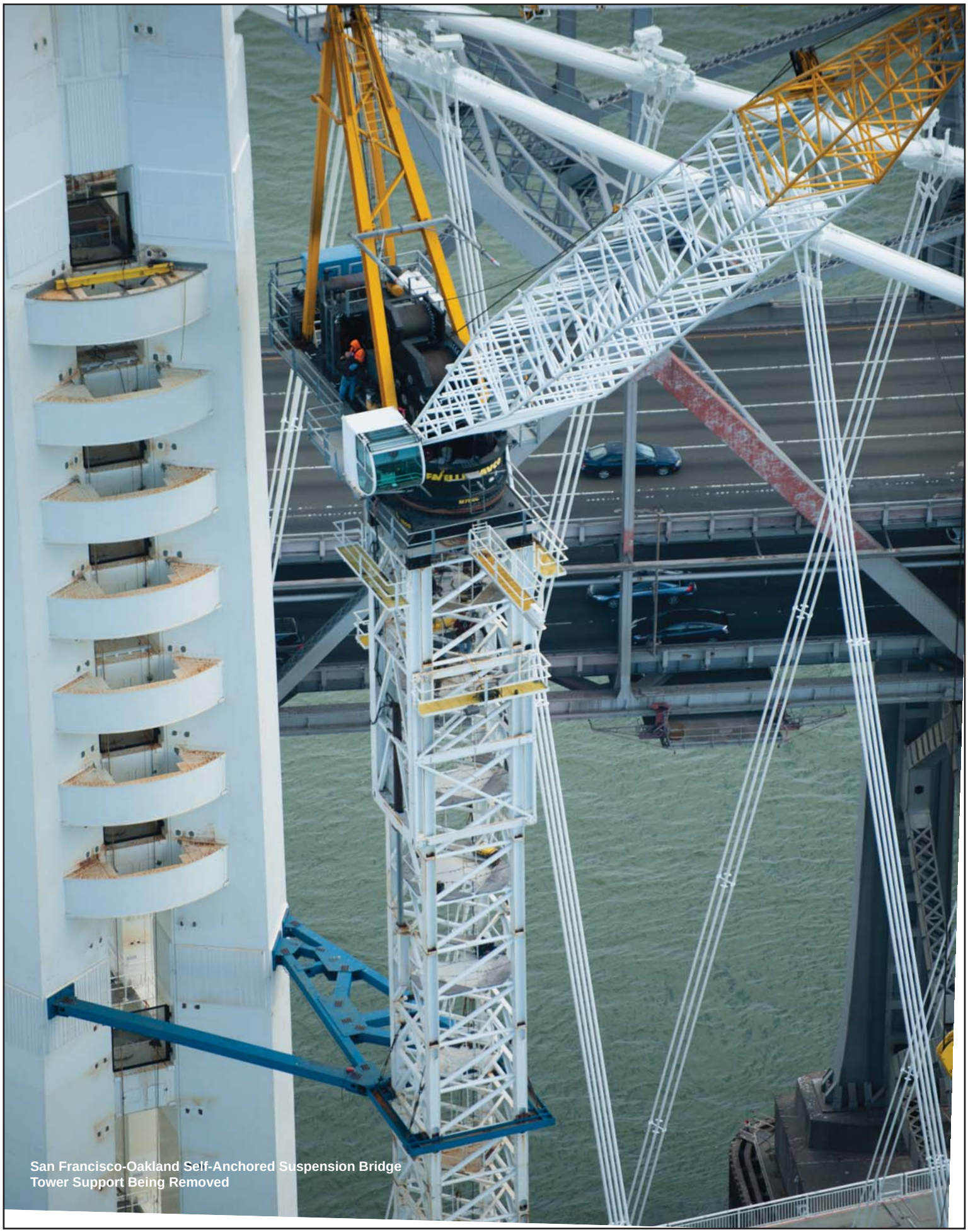
Appendix C: Regional Measure 1 Program Cost Detail ($ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (04/2013)	Cost to Date (04/2013)	Cost Forecast (04/2013)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
US 101/University Avenue Interchange Modification						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	3.8	-	3.8	3.7	3.8	-
Total	3.8	-	3.8	3.7	3.8	-
Subtotal BATA Capital Outlay Support	358.3	64.7	423.0	419.5	423.0	-
Subtotal BATA Capital Outlay Construction	1,569.8	217.5	1,787.3	1,754.1	1,787.3	-
Subtotal Capital Outlay Right-of-Way	42.5	6.2	48.7	43.1	48.7	-
Subtotal Non-BATA Capital Outlay Support	14.0	4.0	18.0	17.6	18.0	-
Subtotal Non-BATA Capital Outlay Construction	92.4	9.5	101.9	82.9	102.0	0.1
Project Reserves	35.6	(8.1)	27.5	-	27.4	(0.1)
Total RM1 Program	2,112.6	293.8	2,406.4	2,317.2	2,406.4	-

Notes:

1 Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRP Expenses for EA 0438U_ and 04157_

2 San Mateo-Hayward Bridge Widening includes EAs 00305_,04501_,04503_,04504_,04504_,04505_,04506_,04507_,04508_,04509_,27740_,27790_,04860_



San Francisco-Oakland Self-Anchored Suspension Bridge
Tower Support Being Removed

Dumbarton Bridge
Seismic Retrofit Project
EA: 04-1A5224

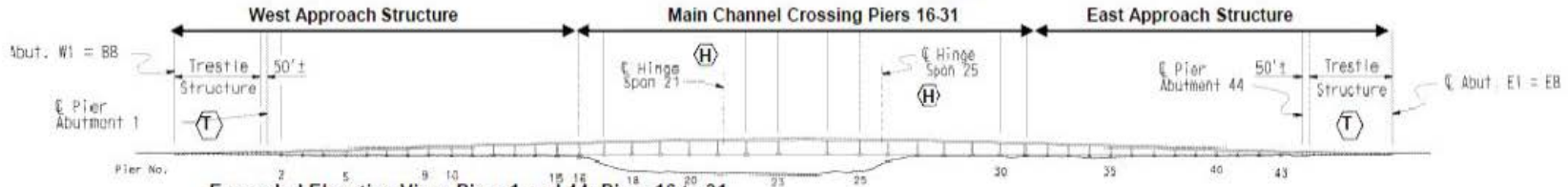
Updated: 3/1/2013

Pier 1 & 44 Retrofit Complete
Footing Overlay Complete
Pier Cap Retrofit Complete
Hinge Retrofit Complete
Isolation Bearing Complete
Steel Cross Frame Complete

Trestle Piles Complete
Trestle Bent Caps Complete
Trestle Columns Complete
Temp Platforms Installed

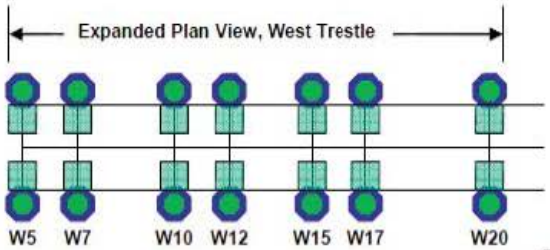
Bearing Fabrication Status
Bearings: 96 of 96
Bearing Installation Status
Bearings: 96 of 96

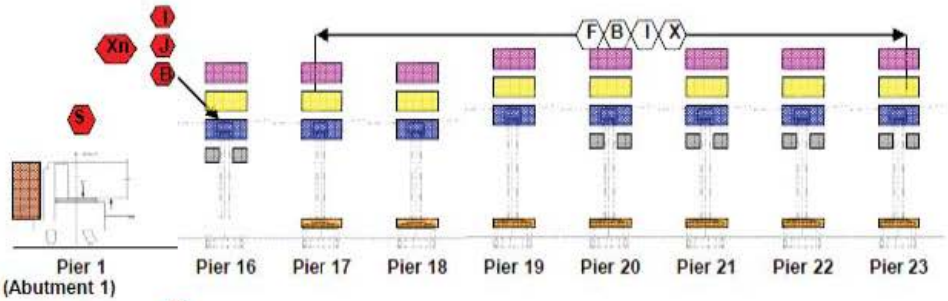
(S) Backwall Seat Retrofit
(T) Trestle Retrofit
(Xn) New Steel Cross Frame
(B) Pier Cap Retrofit
(F) Footing Overlay
(I) Isolation Bearing
(X) Steel Cross Frame Retrofit
(H) Hinge Retrofit
(J) Seismic Joint



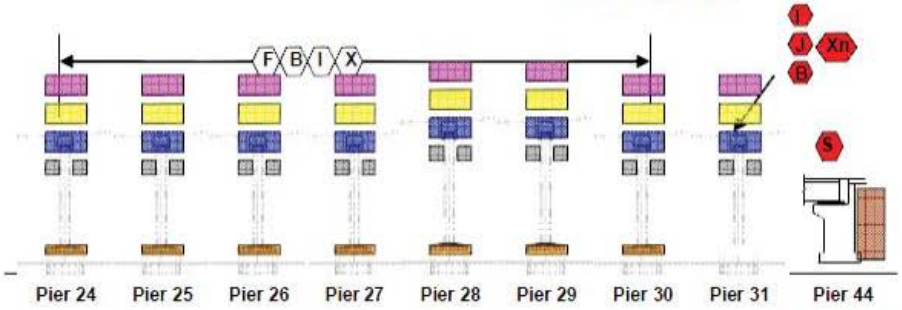
Expanded Elevation View, Piers 1 and 44; Piers 16 to 31

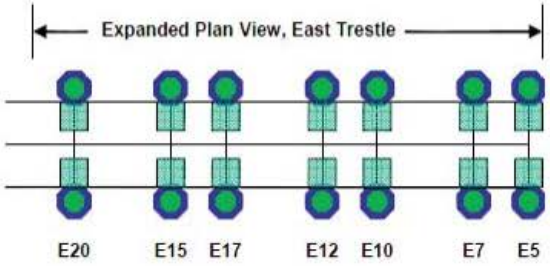
(Note: No retrofit work at Piers 2-15; 32-43)





Pier 1, (Abutment 1)



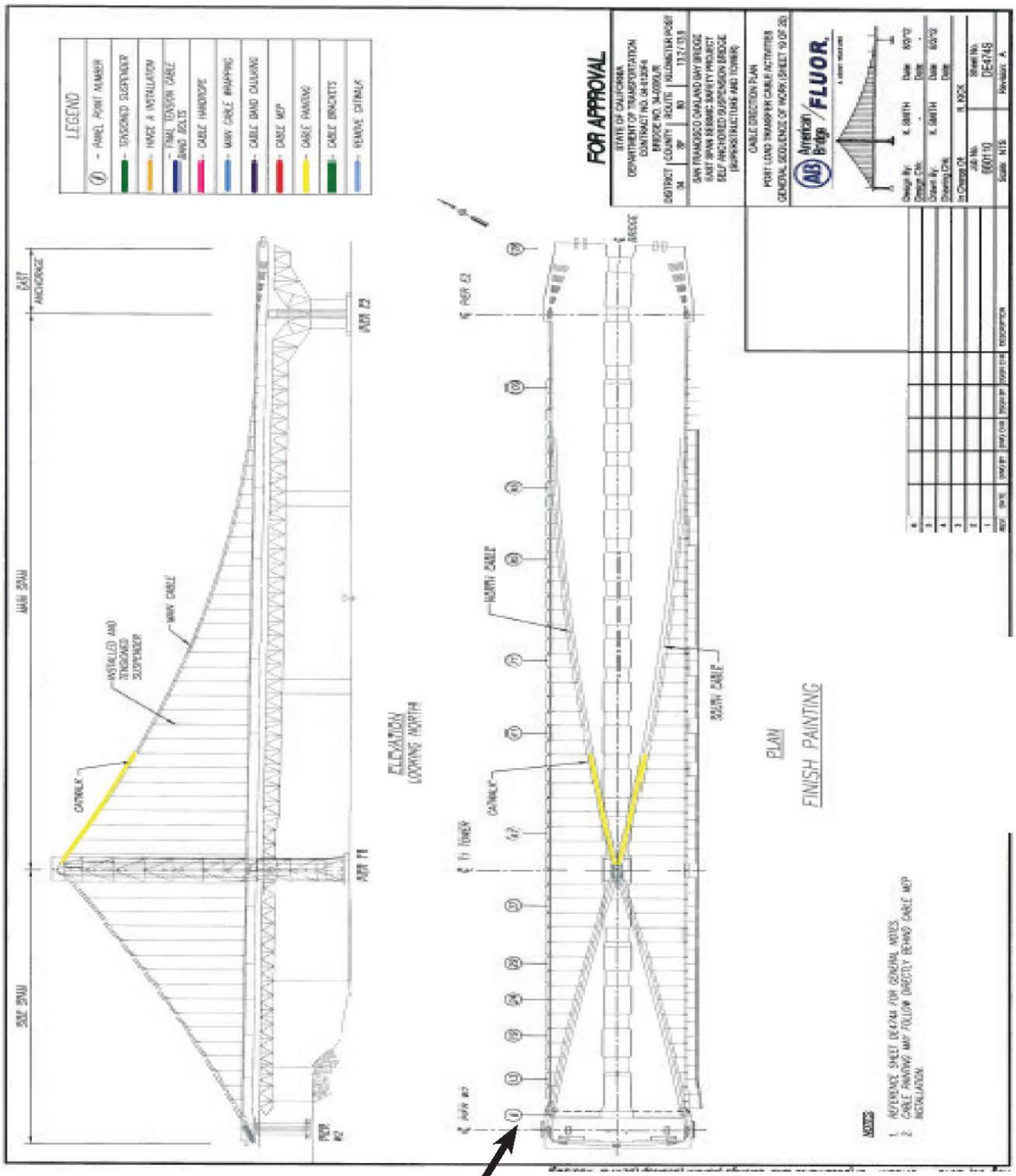


Pier 44, (Abutment 44)

(Piers Not Shown To Scale)

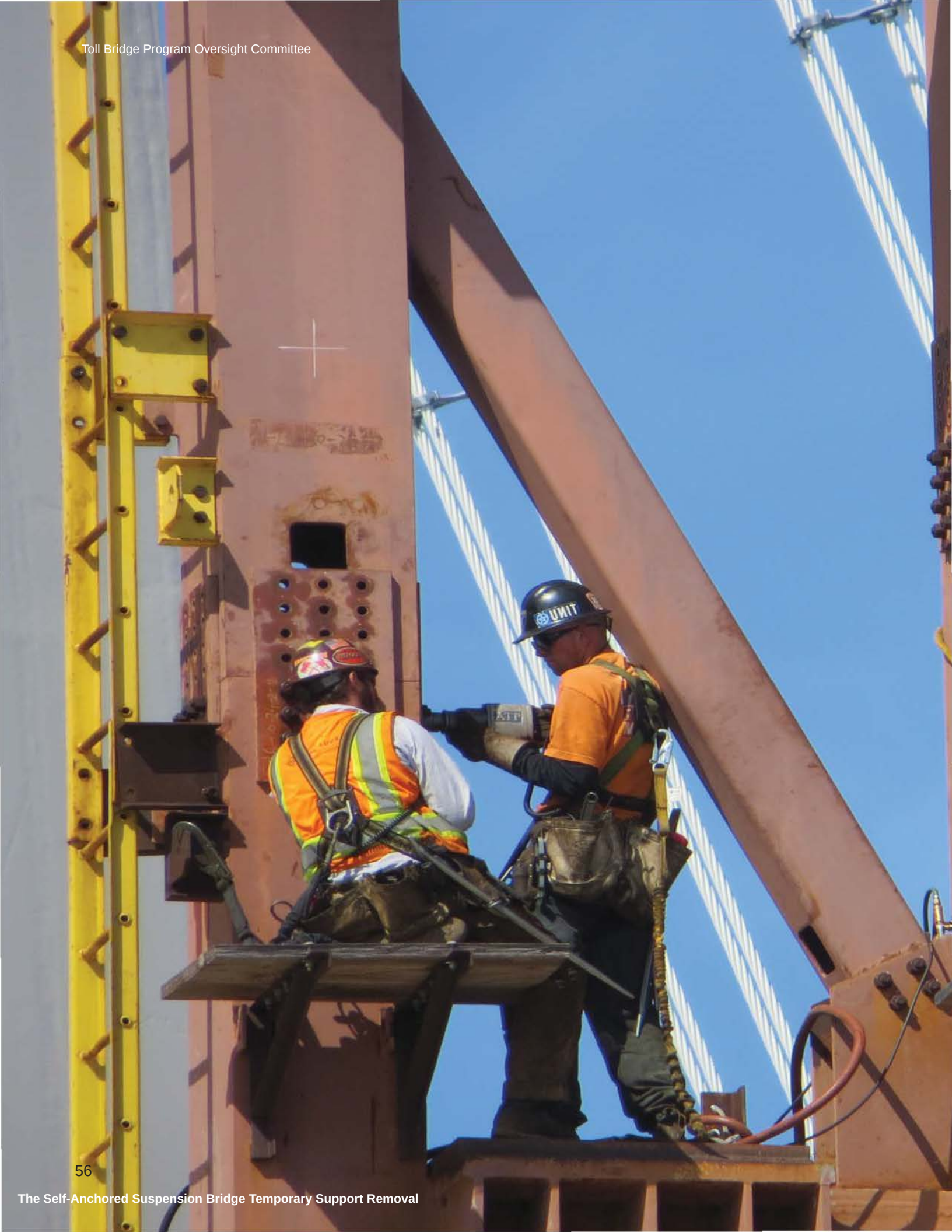
Antioch Bridge Seismic Retrofit Complete

Appendix D: Progress Diagrams
SAS Late February Work Plan Activities



Page 61 Photograph Perspective

San Francisco-Oakland Self-Anchored Suspension Bridge Main Span Cable Painting Complete and Catwalk Being Removed

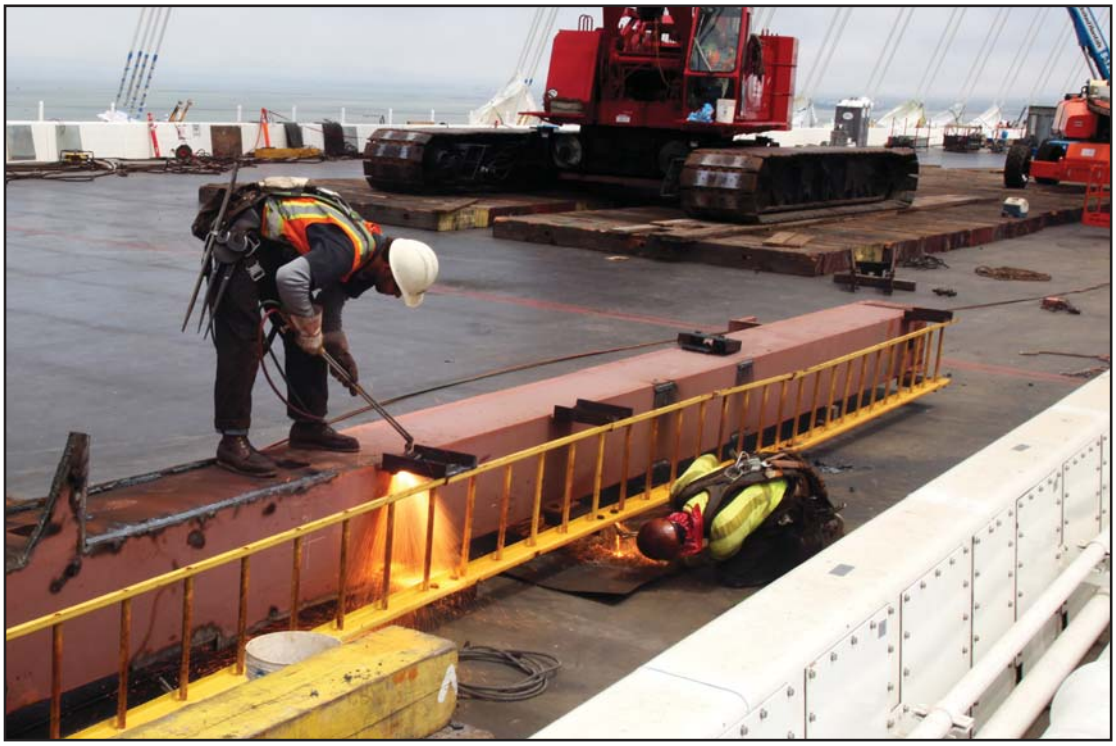

UNIT

Project Photos

Appendix E: Project Progress Photographs

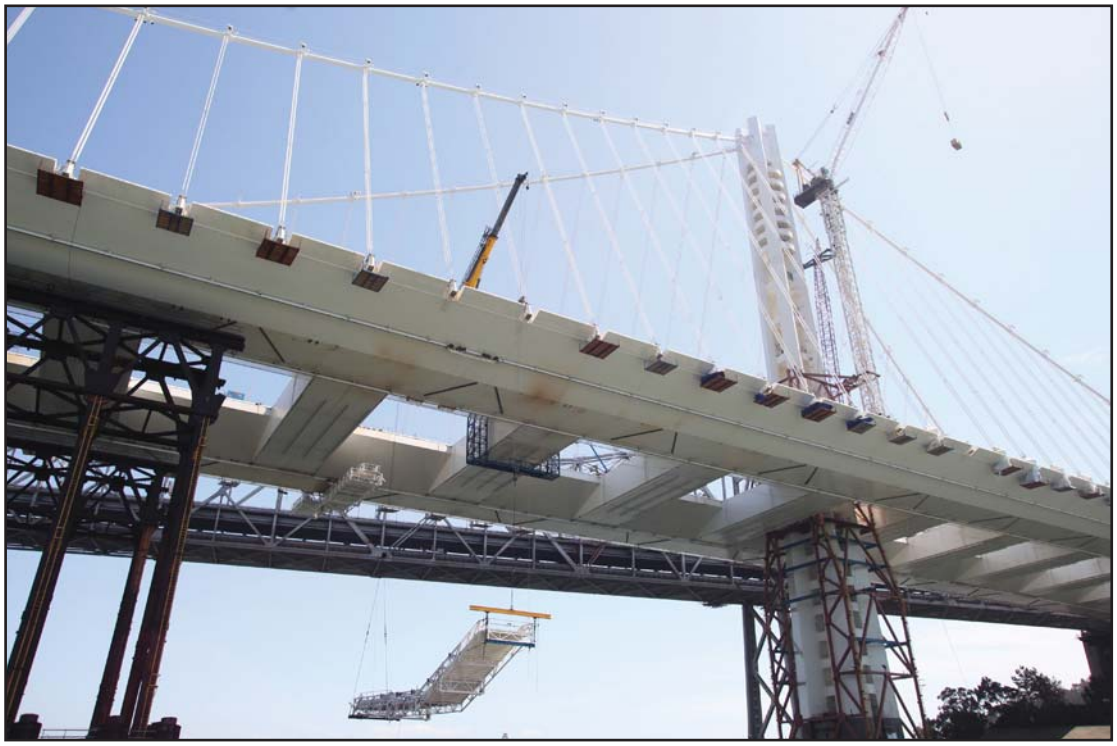
Self-Anchored Suspension Bridge Field Work

SAS Tower and Suspenders with Erection Framing Tower and Crane Being Lowered



Torch-Cutting Ladder Support at T1 Erection Tower Beam

Polyester Concrete Bikepath Overlay in Progress



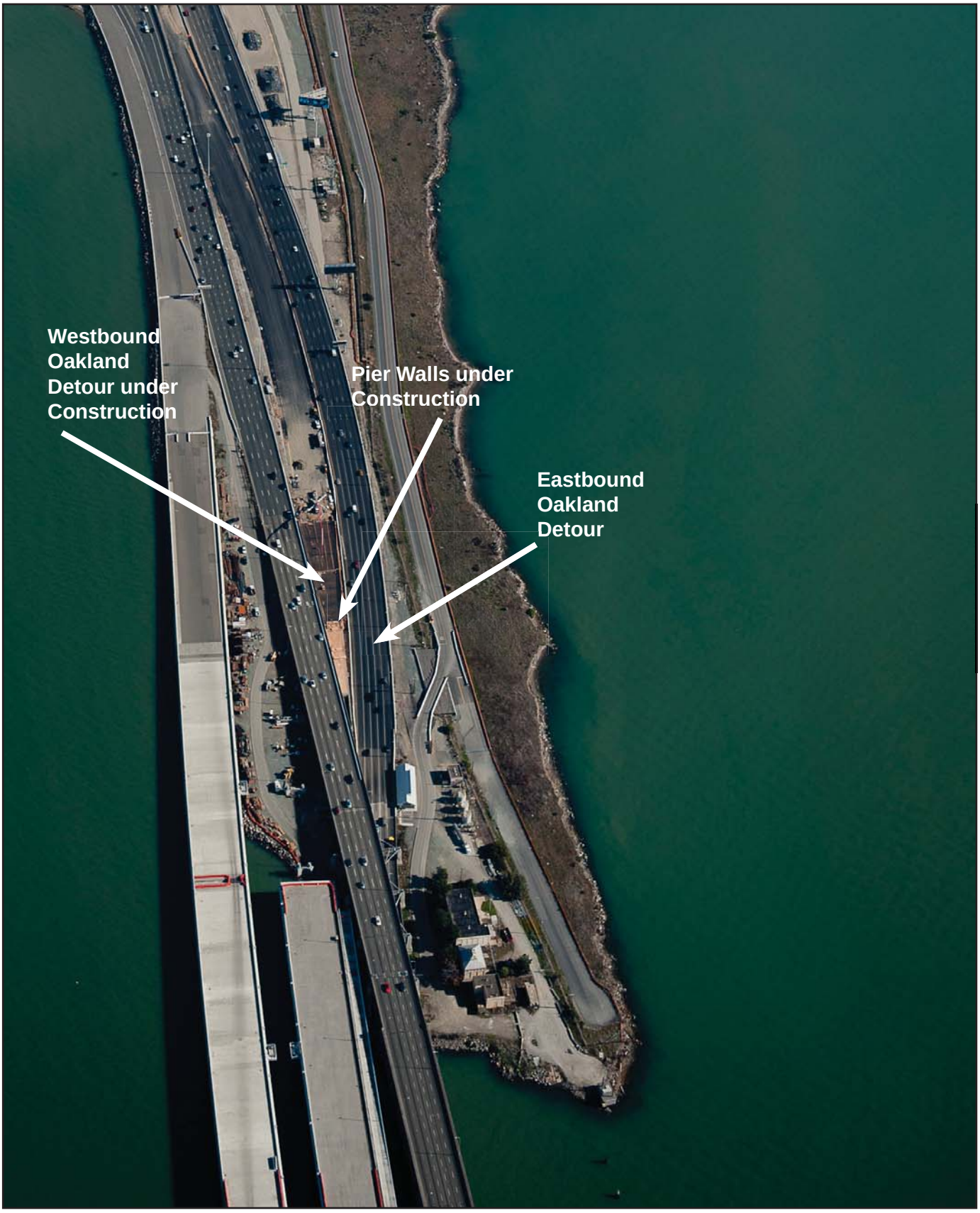
Raising the SAS westbound Traveler

Self Anchored Suspension Bridge Electrical Conduit Installation inside Tower South Shaft at Elevation .57 Meters

Appendix E: Project Progress Photographs

Westbound Oakland Detour

Before Opening to Traffic



After Opening to Traffic and Current Eastbound OTD Progress

Appendix E: Project Progress Photographs

Yerba Buena Island Transition Structure #1 Westbound

Eastbound Seismic Joint Installation between Frame 1 and 2

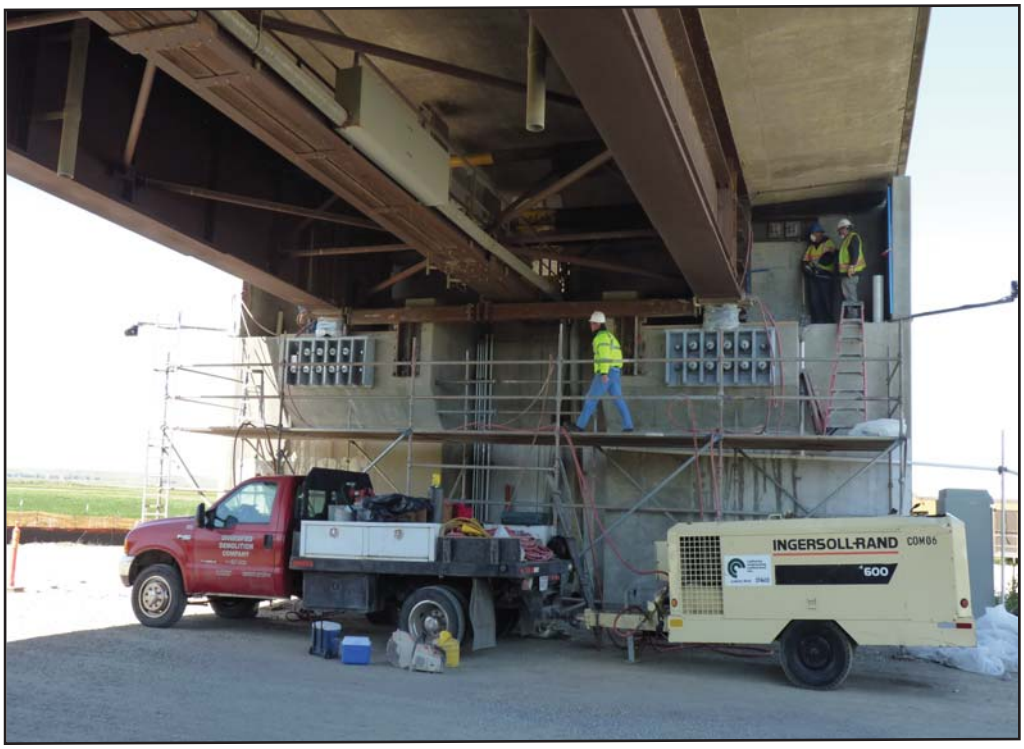
Sign Structures Installed on eastbound and westbound Roadways

Westbound Service Platform Being Installed

Slope Drainage Being Installed

Appendix E: Project Progress Photographs

Antioch Bridge



Antioch Bridge - Pier 41 Girders on Temporary Jacks prior to Installation of Isolation Bearings

Antioch Bridge - Welding of Jacking Stiffeners at Existing Girder Web

Appendix E: Project Progress Photographs

Dumbarton Bridge

Dumbarton Bridge - Ravenswood Pier Staging for Footing Overlay Work

Dumbarton Bridge - Pier 26 Footing Overlay - All Footing Overlay Completed Except Piers 23 & 24

Glossary of Terms

AB 144/SB 66 BUDGET: The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005, and September 29, 2005, respectively.

AB 144/SB 66 PROJECT COMPLETE BASELINE: The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

APPROVED CHANGES: For cost, changes to the AB 144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

AT COMPLETION VARIANCE or VARIANCE (cost): The mathematical difference between the Cost Forecast and the Current Approved Budget.

BATA BUDGET: The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

BATA PROJECT COMPLETE BASELINE: The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

COST FORECAST: The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

COST TO DATE: The actual expenditures incurred by the program, project or contract as of the month and year shown.

CURRENT APPROVED BUDGET: The sum of the AB 144/SB 66 Budget or BATA Budget and Approved Changes.

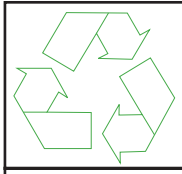
HINGE PIPE BEAMS: Pipes between roadway sections designed to move within their sleeves during expansion or contraction of the decks during minor events, such as changes in temperature. The beams are designed to absorb the energy of an earthquake by deforming in their middle or “fuse” section. Hinge pipe beams are also found at the western piers where the SAS connects to the YBITS (Hinge “K” pipe beams).

PROJECT COMPLETE CURRENT APPROVED SCHEDULE: The sum of the AB 144/SB 66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

PROJECT COMPLETE SCHEDULE FORECAST: The current projected date for the completion of the program, project, or contract.

SCHEDULE VARIANCE or VARIANCE (schedule): The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

% COMPLETE: % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



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The information in this report is provided in accordance with California Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) on the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production is $1,574,873.73.

URS Hatch Mott MacDonald
Bay Area Management Consultants
An Association of URS Corporation and Hatch Mott MacDonald

Self Anchored Suspension Bridge Removal of the Temporary Elevator's Tower Rail

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Stephen Maller, Deputy Director, CTC

RE: Agenda No. - 4a

Item- Program Issues
Bay Bridge East Span Opening Celebration

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
A verbal update on the Bay Bridge New East Span opening celebration will be provided at the TBPOC June 6 meeting.

Attachment(s):
N/A

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Andrew Fremier, Deputy Executive Director, BATA

RE: Agenda No. - 4b
Program Issues
Sawtooth (IERBYS) Building and Site Improvements

Recommendation:
APPROVAL

1. CCO 321 S1 — $1.6M NTE
   Remaining Sawtooth Non-Seismic Building Improvements
   (REFERENCE ITEM 2 - FOR APPROVAL)

2. CCO TBD — $3.2M NTE
   Sawtooth Outdoor Site Improvements
   (REFERENCE ITEM 3 - FOR APPROVAL)

TOTAL CCO REQUEST FOR BUILDING AND SITE IMPROVEMENTS — $4.8M NTE

Schedule Impacts:
N/A

Background:

TABLE 1: SUMMARY OF SAWTOOTH IMPROVEMENT COSTS

Description	Estimated Cost Not to Exceed (NTE)
Item 1: Sawtooth Seismic Building Retrofit (CCO TBD)	**$2M (Preliminary rough cost)**
Item 2: Sawtooth (Non-Seismic) Early Work and Building Improvements	
Early Work Previously Approved (TBPOC 2/6/13)	
CCO 295 Initial Pile Investigation ($200,000)	
CCO 296 Relocation ($200,000)	
CCO 297 Demolition ($300,000)	
CCO 298 Advanced Planning ($100,000)	
CCO 321 Early Renovation Work ($600,000)	
Total Approved CCOs: $1.4M	**$1.4M**
CCO 321 S1 Additional Funds for Non-Seismic Building Renovations	**$1.7M**
Item 3: Sawtooth Outdoor Site Improvements (CCO TBD)	**$3.5M**
Item 4: Sawtooth Programming	**$0.2M (Preliminary rough cost)**

1. **General Information:**

- The recommended plan for the Sawtooth Building is to eventually turn it over to the park services as part of the future Gateway Park.

- The current approved improvement project is to use the Sawtooth Building as a Bridge Maintenance Training Facility as part of the Phase III Maintenance Complex Project.

- The current improvement design package does not preclude the use of a Bridge Maintenance Training Facility or placing Sawtooth in service with the future Gateway Park.

- The Sawtooth Seismic Retrofit and Non-Seismic Building Improvements are potentially eligible for BATA/SHOPP funds.

- The short term use of the Sawtooth Building is consistent with the planned Caltrans Bridge Maintenance use as a training facility. The Maintenance use is both short term (immediate storage of the new East Span bridge replacement parts and maintenance equipment, training facility for Maintenance concurrent with the seismic safety opening event of the new bridge to traffic) and the long term use (on-going Maintenance training facility and storage of bridge replacement parts).

- The project is proceeding with the Seismic Retrofit design for the Sawtooth building, with the work to be completed after Labor Day. The Building Official has reviewed a preliminary draft of the Seismic Strategy and is comfortable with a limited use (1 week duration during the Opening events). It is expected that after the opening, the building will be closed to the public until the seismic retrofit construction work is completed.

- In a working meeting, the Building Official expressed the concern for glass breakage from the windows in the high bay area during a seismic event. The Design Architect recommended a film product that will mitigate falling and shattering glass during a seismic event. The Building Official's office has reviewed the product and finds it acceptable to use in this application.

- Sawtooth Building and Site plans have been reviewed by the following parties: Caltrans Design Engineering Services, Caltrans Transportation of Architecture (Building Official), Caltrans Cultural Resources, Caltrans SAS Construction, State Historic Preservation Office, State Fire Marshall, Division of State Architect, City of Oakland Fire Department, Caltrans Bridge Maintenance, Caltrans Toll Bridge Design, Toll Bridge Program Management, etc.

2. **Sawtooth Building Seismic Retrofit Update (FOR INFORMATION) –**

The Parsons Brinckerhoff (PB) structural team started working on the seismic retrofit design for the Sawtooth building in mid-March 2013. The activities performed to date towards meeting the goal of producing a seismic retrofit design for the Sawtooth building are the following:

- An initial pile foundation investigation of the existing timber pile was performed where the Contractor attempted to extract one of the building's original timber piles. The pile removal was attempted but not successful, due to the long length of pile and sufficient skin friction, . An 8-inch segment of the top portion of the pile was removed and inspected. This segment was found to be in very good condition and showed no evidence of dry rot, which indicated to the team that the existing foundation is in better shape than was originally assumed as indicated in an earlier structural evaluation report released in 2005. The assumptions

in the 2005 report did not include any foundation investigation work whatsoever. Therefore the retrofit solutions should not have extensive foundation additions or modifications.

- The PB structural team has performed an analysis of the Sawtooth seismic vulnerabilities using the ASCE 31 "Seismic Evaluation of Existing Buildings" checklist and the ASCE 41 "Seismic Rehabilitation of Existing Buildings". As part of the ASCE evaluation a SAP2000 structural model was created to evaluate the building's load path and the strength of the individual existing members. (See Figure 1). As part of this evaluation, the seismic vulnerabilities of specific structural members and connections were identified.
- Based on the vulnerabilities assessment, the PB structures team has identified specific initial seismic measures that address the vulnerabilities.
    - In the longitudinal direction, the 'X' bracing connections (8 total) need to be strengthened in the 4 bays where the bracing is located. (See Figure 2).
    - In the transverse direction, the 38 truss frames each need 3 connections in the top truss near the column connection strengthened by adding an additional bolt to those connections. In addition, the top of each column needs to be strengthened by adding additional plates, and the concrete base of each column needs to be fortified. (See Figure 3).
- Currently Caltrans structural design oversight is reviewing the PB's structural team's proposed draft seismic strategy.
- One sample was extracted from the bottom of an existing steel column and was tested at Translab for hardness, tensile, charpy, and chemical properties. The sample meets ASTM A709 Grade 36 and appears to be weldable. METS recommends extracting at minimum two more samples from other locations and testing these samples so that the weldability of all the columns can be better represented and assessed.
- The PB team has developed initial lead abatement plans for the seismic retrofit work. The plans have been transmitted to Caltrans construction, and work will start on the lead abatement by mid June 2013.
- Schedule
    - Seismic retrofit lead abatement construction (Mid June 2013)
    - Concurrence between PB team and Caltrans on seismic retrofit measures (End of June 2013)
    - Final Caltrans reviewed seismic retrofit design plans (End of July 2013)
    - Start construction of Sawtooth seismic retrofit (After Labor Day 2013)

Table 2: Sawtooth Building Seismic Retrofit

CCO#	Description	CCO Status	TBPOC Status	Estimate (ROM)	Contractor Pricing	Notes
TBD	Sawtooth Building Seismic Retrofit	Target 8/2013	Target 8/2013	$2.0M	No estimate available	Design Status - Adv. Planning Study Level

3. Sawtooth (Non-Seismic) Building Improvements (FOR APPROVAL) -

- The PMT recommends approval to proceed with a SAS Contract Change Order for the Sawtooth Building (Non-Seismic) Improvements for a not to exceed value of $1.7M to perform the remaining building renovation work. The overall not to exceed cost, including the early work, is approximately estimated at $3.1M.
- The remaining scope of the building improvements include the following: Roof repairs, glass protection, fire protection improvements, mechanical/electrical/plumbing improvements, fire/life safety upgrades,

ADA accessibility upgrades, new bathrooms, lighting and heating improvements, and other miscellaneous architectural improvements.

- Schedule: Target August 26, 2013

Table 3: Sawtooth (Non-Seismic) Building Improvements

	CCO#	Description	CCO Status	TBPOC Status	Current Estimate/ Actual Cost NTE	Engineer Estimate	Contractor Pricing
1	295	Initial Pile Investigation	Executed	Approved 2/6/13	$0.2M		
2	296	Relocation	Executed	Approved 2/6/13	$0.2M		
3	297	Demolition	Executed	Approved 2/6/13	$0.3M		
4	298	Advanced Planning	Executed	N/A	$0.1M		
5	321	Early Work Renovation	Executed	N/A	$0.6M		
6	**Total Early Work CCO Costs (Already Approved)**				**$1.4M**		
7	321S1	Remaining Renovation Work	In-Progress	Request for Approval 6/9/13	$1.7M	$2.0M*	$1.6M
Total Non-Seismic Early Work and Building Improvement Costs (includes all earlier approved CCOs) (Line 6 + Line 7)					**$3.1M**		

*Engineer estimate of total building renovation costs (line 3+5+7) is approximately $2.9M.

- In the February 6th, 2013 TBPOC meeting, approval was received to proceed with the SAS Contract Change Orders related to performing early work for the Sawtooth project (relocation of bridge maintenance staff, Sawtooth building preliminary foundation investigation, soft demolition of Sawtooth building). The already approved CCOs related to the early work have a total not to exceed budget of $1.4M.

- To date, the construction progress of the Sawtooth Building Improvement project includes the following, within the approved $1.4M budget:
  - Relocation of bridge maintenance staff (complete)
  - Preliminary foundation investigation (complete)
  - Soft Demolition (complete)
  - Mechanical, Electrical, Plumbing rough in work (on-going)
  - Repair of hole related to pile investigation work (on-going)
  - Structural steel frame (on-going)
  - Stud Framing (on-going)
  - Glazing Repairs (on-going)

4. Sawtooth Outdoor Site Improvements (FOR APPROVAL) -

- The PMT recommends approval to proceed with a SAS Contract Change Order for the Sawtooth Outdoor Site Improvements for a not to exceed value of $3.5M.
- The scope of the outdoor site improvements include the following: Realignment of driveway to access the building, repaving and striping of parking area, installation of outdoor gathering and seating area, installation of fencing around the perimeter, ADA accessibility, procurement and installation of outdoor lighting, etc.
- Schedule: Target August 26, 2013

Table 4: Sawtooth Outdoor Site Improvements

CCO#	Description	CCO Status	TBPOC Status	Current Estimate/ Actual Cost NTE	Engineer Estimate	Contractor Pricing
TBD	Sawtooth Outdoor Site Improvements	In-Progress	Request for Approval 6/9/13	$3.5M	In-Progress	**$3.2M (excluding lightpoles)**

See attachment for site cost breakdown.

5. Sawtooth Programming Update (FOR INFORMATION)

- Karin Betts (BATA) and design consultant Leslie Stone and Associates are developing plans for the initial programming of the interior space of the Sawtooth building, to be used for the East Span Opening events. The plans are for an interdisciplinary East Span exhibit utilizing existing assets (project photography, videography, models, bridge parts, etc.)
- The exhibits are being designed to be modular, flexible and usable in the future for public audiences and/or for a future training facility.
- Schedule: Exhibit plans to be completed by July 2013; Fabrication and installation of exhibit in July-August 2013
- Current Approximate Cost Estimate: $0.2M

IERBYS Site Work Cost Split:

Breakdown of Site Work per plan sheets:

Demo, earthwork, AC Paving	$165,000	
Fencing and Gates	$38,500	
Signage and Striping	$11,500	
Concrete and Rebar	$159,500	
Misc. steel	$25,000	
Electrical and Plumbing	$50,000	
CIDH Piles for lightpoles	$88,500	plus cost for lightpoles
Bikeracks and fountain	$19,000	
Dumpsters	$10,000	
Inspection	$75,000	
	$642,000	
GC's/O+P (12%)	$77,040	
	$719,040	Note
Terrace, incl. GC's/O+P	$1,952,160	See separate breakdown
	$2,671,200	
Allowance (10%)	$267,120	
	$2,938,320	
Contractor Mark-up (7%)	$205,682	
	$3,144,002	say $3.2M

Notes:
Pricing based on one General Contractor performing all site works
Need to add cost for client furnished lightpoles
If terrace is deleted, an allowance shall be added to substitute the area of the terrace with something else

Terrace Cost Breakdown:

Demo, earthwork, AC Paving	$115,000
Concrete and Rebar	$570,000
CMU	$208,000
Misc. steel	$300,000
Painting and coatings	$140,000
IPE Hardwood	$135,000
Synlawn and tile substrate	$35,000
Sealants, Joints, WABO	$36,000
Pipe Supports	$19,000
Louvers/doors	$10,000
Inspection	$175,000
	$1,743,000
GC's/O+P (12%)	$209,160
	$1,952,160

ITEM 1 : SAWTOOTH BUILDING RETROFIT STRATEGY

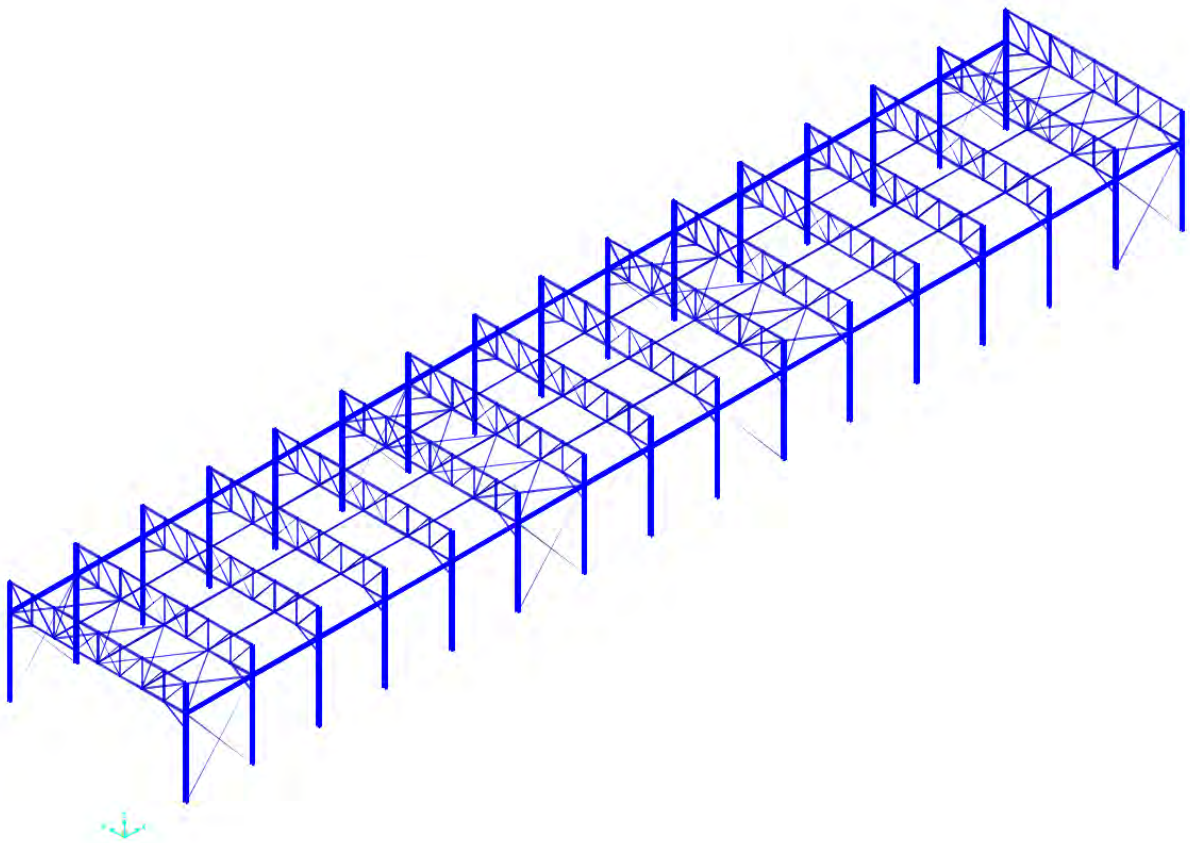


FIGURE 1- IERBYS SAP2000 MODEL Showing Existing Structure Configuration

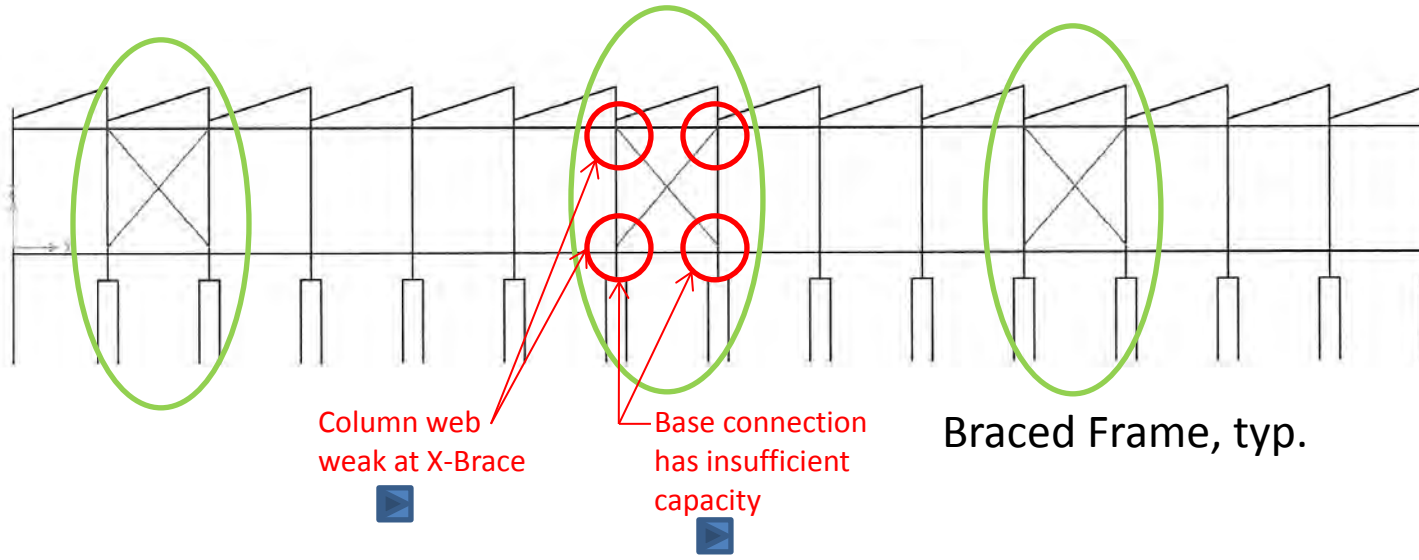


FIGURE 2 – IERBYS Longitudinal Vulnerabilities

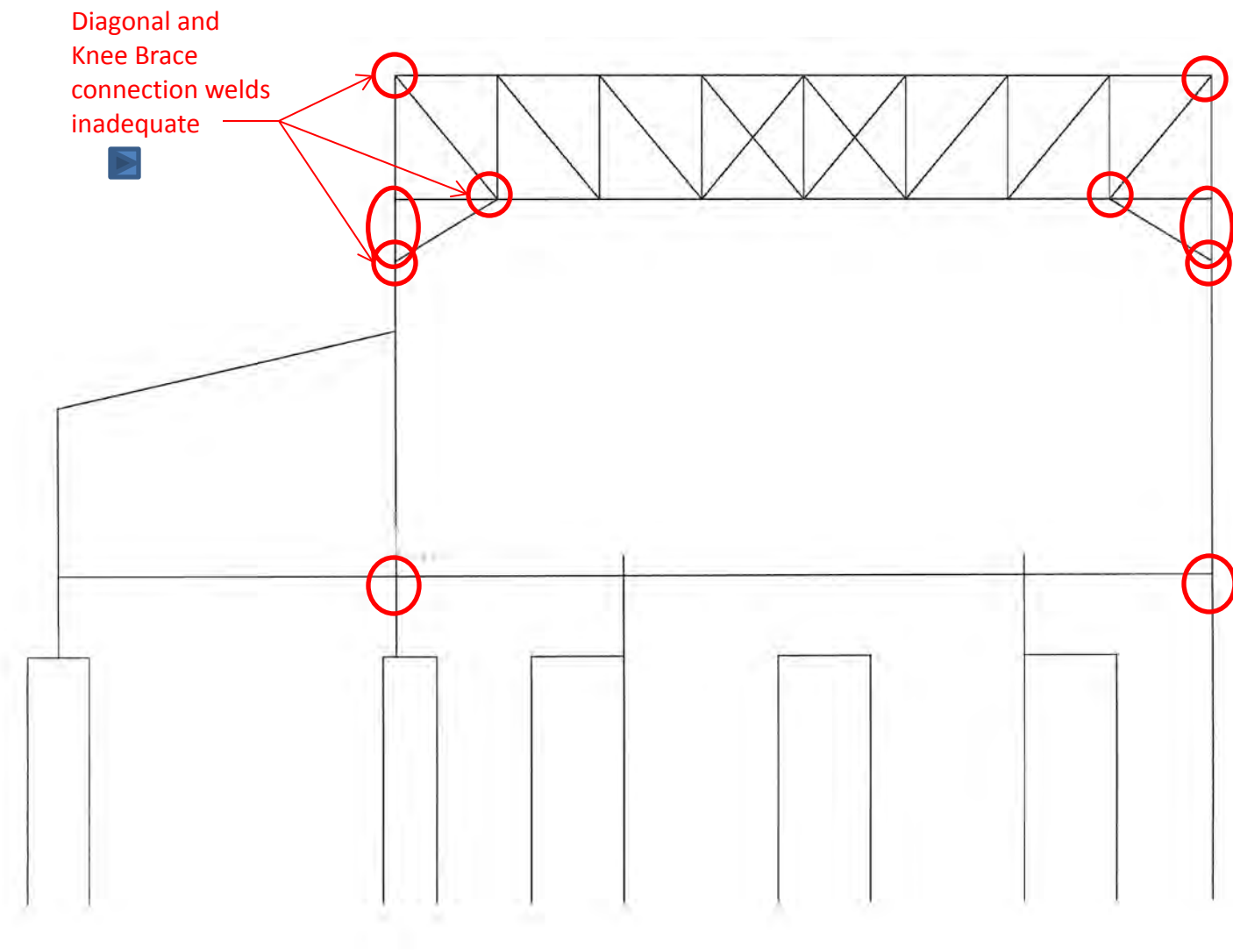


FIGURE 3 – IERBYS Transverse Seismic Vulnerabilities

FIGURE 4 - Typical Column BASE

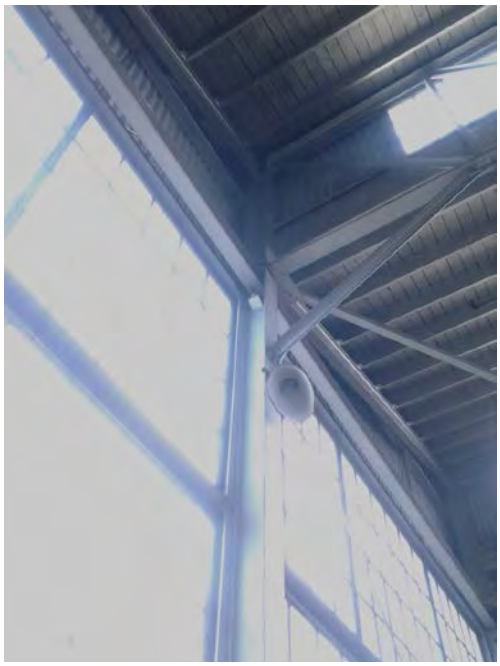
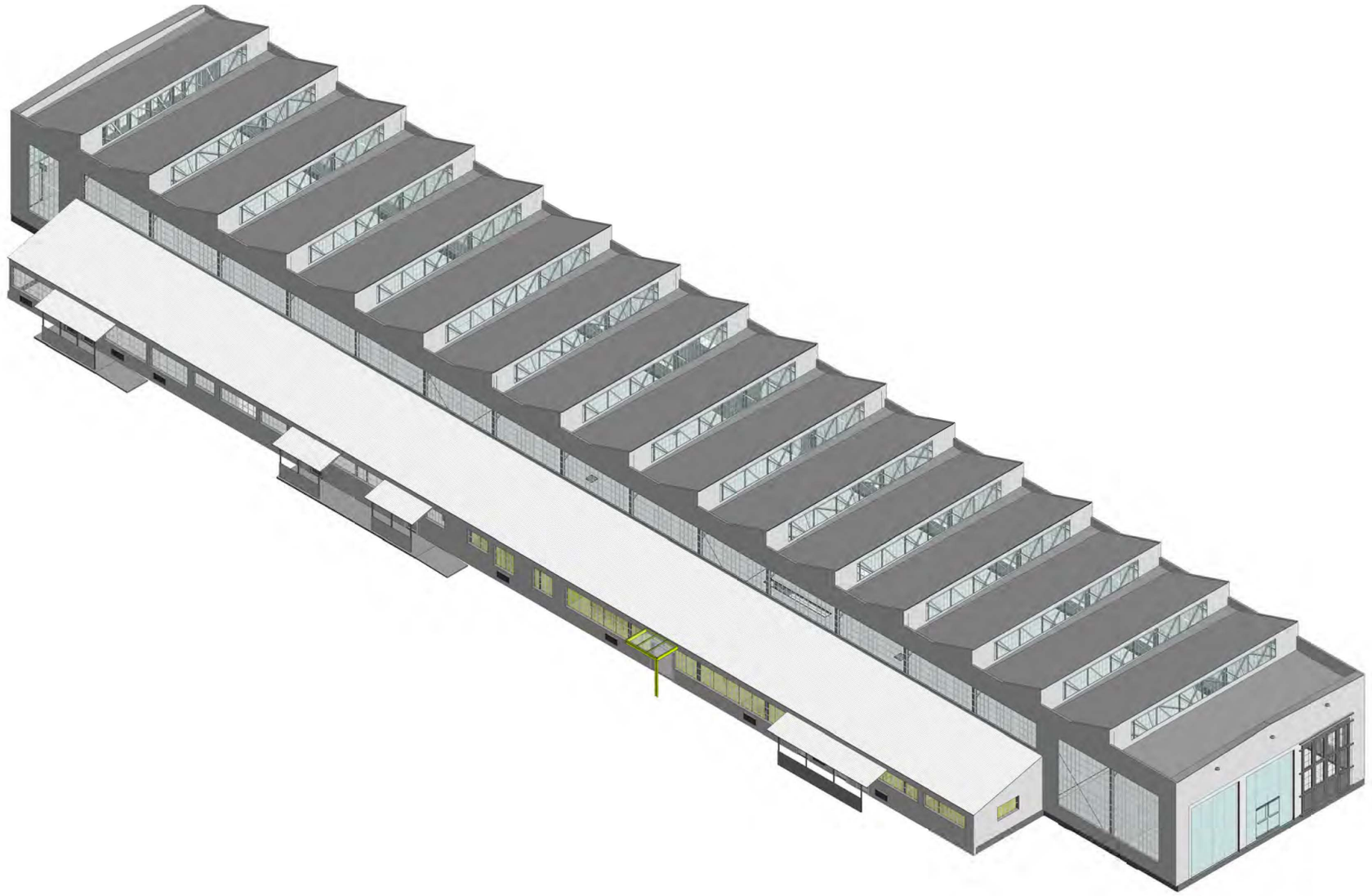


FIGURE 5 – Typical Diagonal Column-Truss Connection

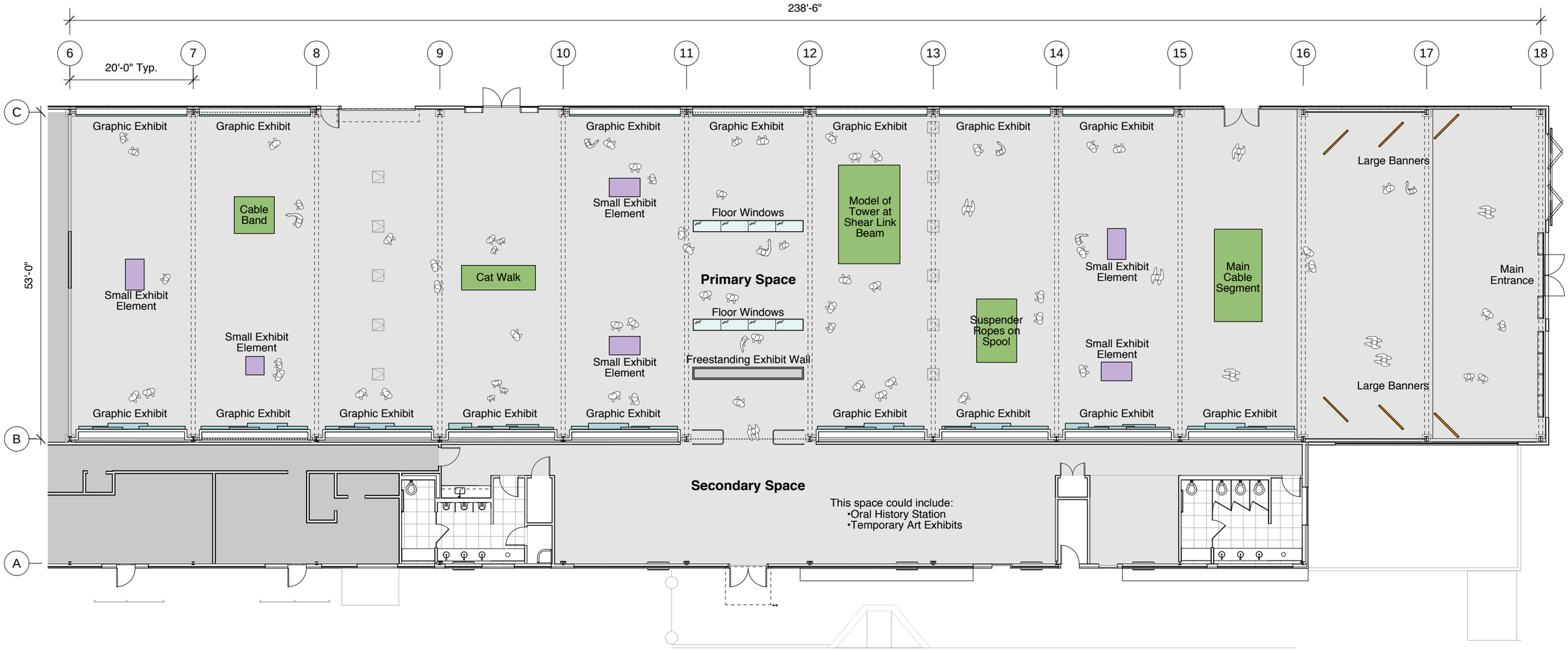
ITEM 2: SAWTOOTH (NON-SEISMIC) BUILDING IMPROVEMENTS




NOR-CAL
MOVING SERVICES

ITEM 3: SAWTOOTH OUTDOOR SITE IMPROVEMENTS

ITEM 4: SAWTOOTH PROGRAMMING



1 Plan

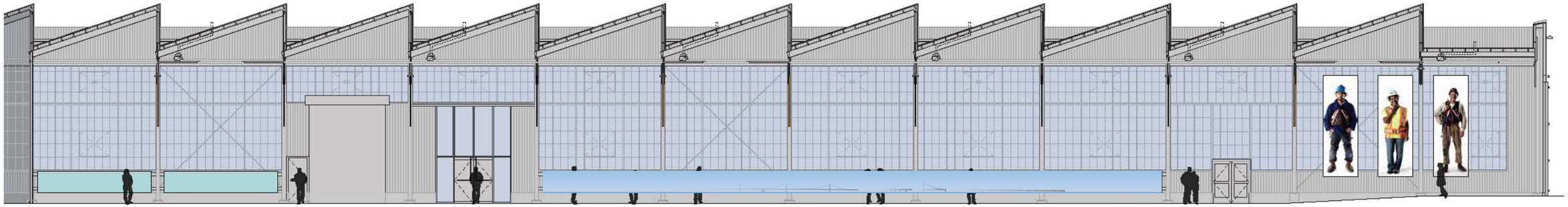
Scale: 1/16" = 1'-0"

0 5 15 FT

Leslie Stone Associates
104 Calendonia Street
Sausalito California 94965
Tel 415 332 3306

IERBYS: PROGRAMMING
Oakland, California

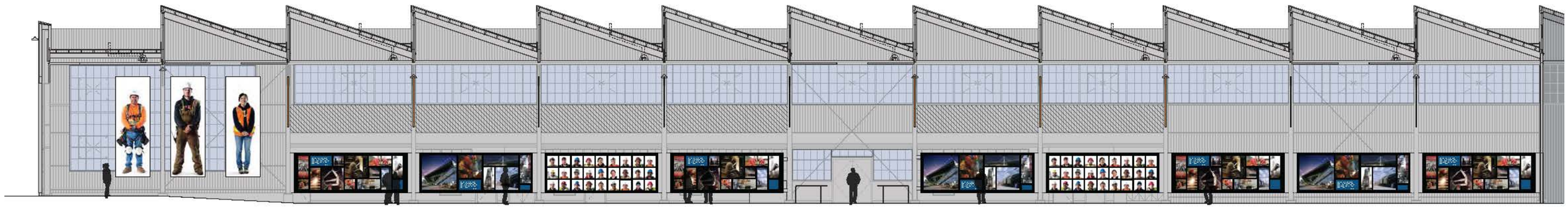
SCALE	ISSUE DATE AND REVISIONS	DRAWING	SHEET
As Noted	May 18th 2013	Exhibit Plan	Ex 01.00
PHASE: Design Development			



1 **Elevation: North Wall**

Scale: 1/16" = 1'-0"

0 5 15 FT



2 **Elevation: South Wall**

Scale: 1/16" = 1'-0"

0 5 15 FT

NOTE:
ALL IMAGES FPO

Leslie Stone Associates
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IERBYS: PROGRAMMING
Oakland, California

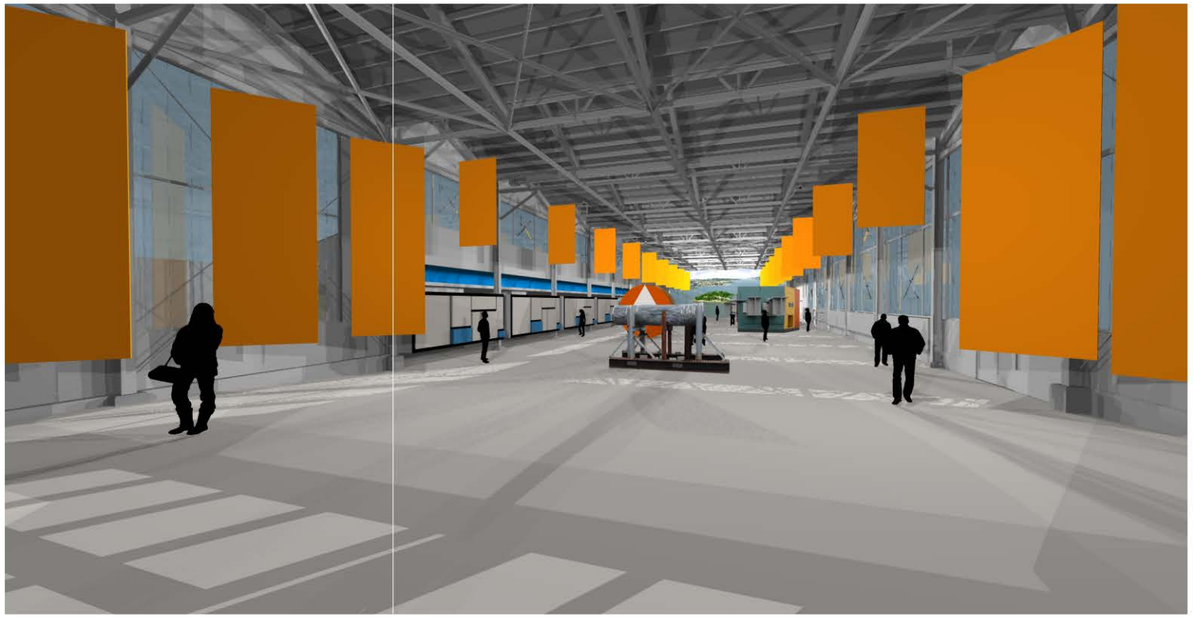
SCALE
As Noted

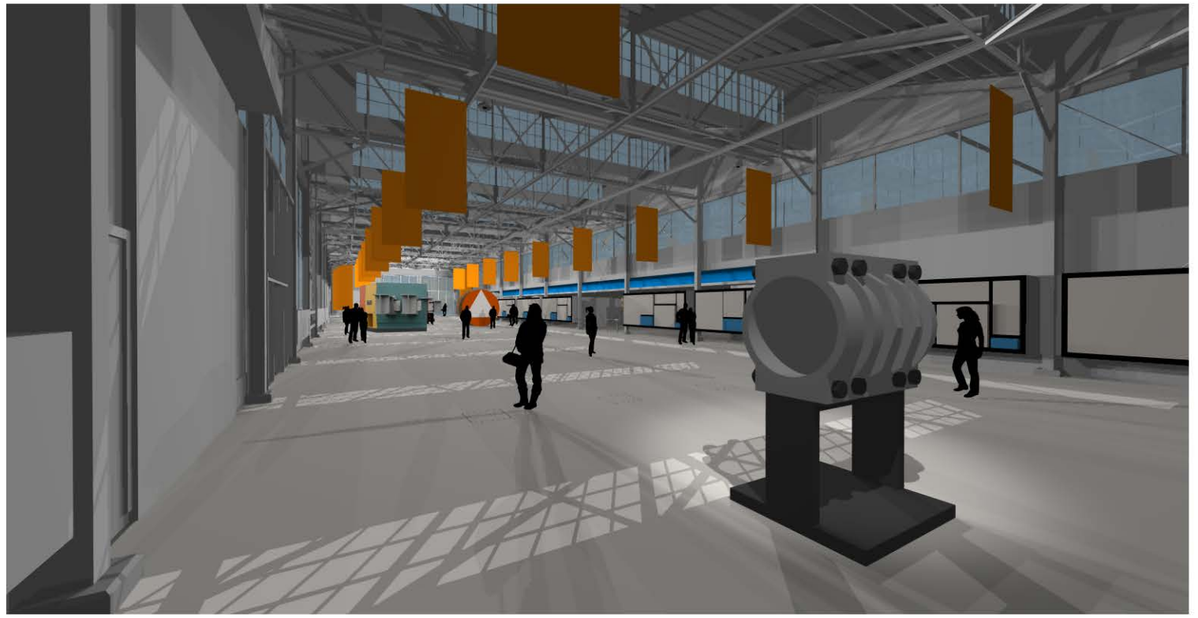
PHASE
Design Development

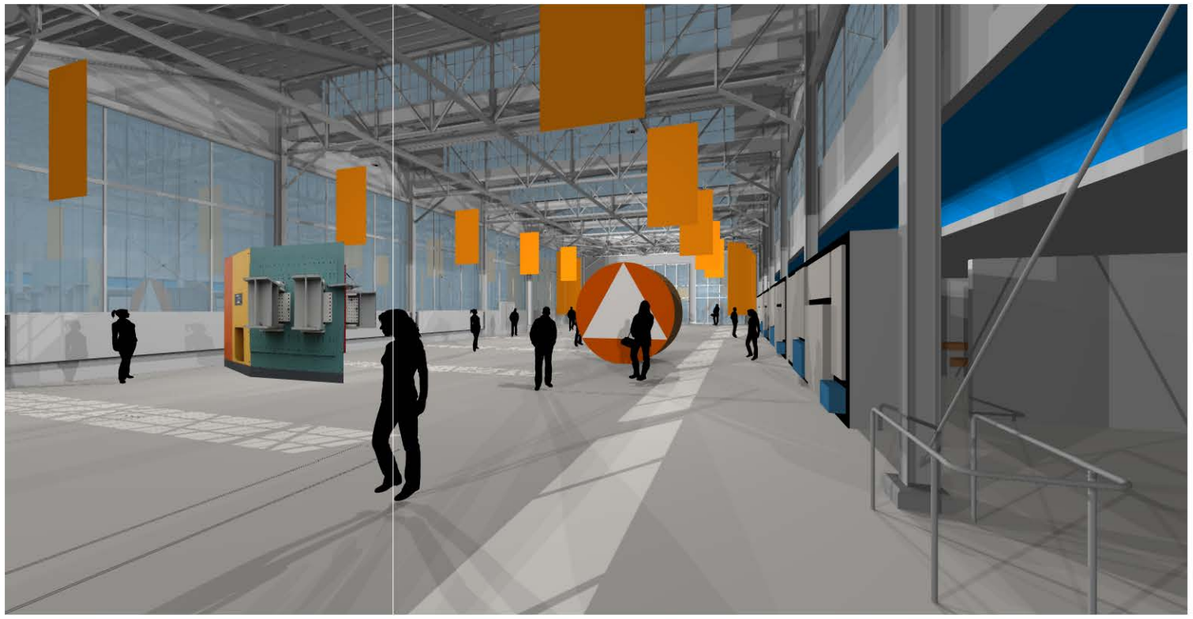
ISSUE DATE AND REVISIONS
May 18th 2013

DRAWING
Elevations

SHEET
Ex 01.01







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IERBYS: PROGRAMMING

Oakland, California

SCALE
As Noted

PHASE
Design Development

ISSUE DATE AND REVISIONS
May 18th 2013

DRAWING
Renderings

SHEET
Ex 01.05

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** June 3, 2013

FR: Program Management Team (PMT)

RE: Agenda No. - 5a
Item- San Francisco-Oakland Bay Bridge Updates
E2 Update

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
A verbal update on the E2 status will be provided at the TBPOC June 6 meeting.

Attachment(s):
N/A

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** June 3, 2013

FR: Tony Anziano, Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5a1

Item- San Francisco-Oakland Bay Bridge Updates
Pier E2 Shear Key S1 & S2 Anchorage Budget Authorization Request.

Recommendation:
APPROVAL

Cost:

May 9th TBPOC Budget Authorization:	$4,300,000.00
Additional Budget Request:	$5,700,000.00
Overall Budget Request:	**$10,000,000.00**

Schedule Impacts:
Discussions with the Contractor on possible impacts to SSO are in progress.

The Contractor is performing the field work to prepare for the installation of the Shear Key S1 & S2 post-tensioning saddle anchorage system on an aggressive 6 to 7 days per week, 10 to 12 hours per day schedule. The fabrication of the steel saddle is also progressing with material procurement, preparation of welding quality control plans, and shop drawings all under way.

Discussion:
On April 11th the TBPOC approved $4,300,000 for early acquisition of materials which was subsequently amended at the May 9th TBPOC meeting making it available for use on all Shear Keys S1 & S2 post-tensioned saddle anchorage system costs. The Engineers Estimate as of May 31, 2013 shown on the Pier E2 Shear Key Tracking Sheet is $7,627,000. The Engineers estimate is an evolving number as the design details are finalized.

With the anticipated approval of CCO's 313, 320, 325, 326, and 327 at the June 6th TBPOC meeting, the Department will have exhausted the original budget authorization of $4,300,000. In order to continue the Pier E2 Shear Key S1 & S2 anchorage work and to establish an appropriate budget, the Department is requesting an additional authorization of $5,700,000 bringing the total authorization to $10,000,000. With the evolving nature of the work and the urgency of completing this

work to the current SSO schedule it is anticipated that a request for the current Engineers Estimate alone ($7,627,000) will not be sufficient funding to complete this work.

Risk Management:

The SAS risk register is carrying the risk "Fabrication and Installation of a bracket to secure shear keys to Pier E2" in the range of $8M to $15M for the work related to fabricating and installing a retrofit to act in the place of the A354 BD rods manufactured in 2008.

Delays to bridge opening should they occur are not considered in these risks but are captured to the extent they were known in March 2013 in the risk "Schedule Delays to Seismic Safety Opening".

Attachment(s):

E2 Shear Key S1/S2 and Anchor Rod CCO Tracking Status

THE SAN FRANCISCO-OAKLAND BAY BRIDGE SEISMIC SAFETY PROJECT
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

CONFIDENTIAL INFORMATION - INTERNAL USE ONLY

San Francisco - Oakland Bay Bridge New East Span Self-Anchored Suspension Project

E2 Shear Key S1/S2 and Anchor Rod CCO Tracking Status

Updated 5/31/2013

CCO NO.	Description	Reference	Work Performed By	Method of Payment	Rough Order of Magnitude (per ABFJV, Revised 5/22/13)	Engineer's Estimate 5/31/13	CCO Net Dollar Amount (Adds & Credits)	Date of TBPOC Approval	ATP Letter to ABF	Executed Date	ABFJV Spent to Date (Info. known as of 6/3/13)	Notes
Field Work												
320	Temporary Bearing Shimming	Install steel shim plates between the temporary bearing foot and a temporary jacking lug welded to the temporary bearing base plate. (RFI 3242)	ABFJV	LS	$ 100,000.00	$ -	$ 100,000.00		5/21/13			To TBPOC June 6, 2013 meeting for approval
325	Concrete Demolition	Concrete removal for saddles, construction joint surface prep. (bush hammering), construction joint keyway saw cutting/chipping, drill and bond dowel	Conco	EWFA	$ 750,000.00	$ 503,000.00	$ 750,000.00		5/21/13		$ 207,309.00	To TBPOC June 6, 2013 meeting for approval
329	E2 Shear Key Concrete	Forming, placing, curing, and finishing concrete	Conco	EWFA	$ 1,000,000.00	$ 1,616,000.00						
326	Concrete Coring	Concrete coring , water disposal , etc.	Penhall	EWFA	$ 1,000,000.00	$ 189,000.00	$ 1,500,000.00		5/28/13		$ 542,537.00	To TBPOC June 6, 2013 meeting for approval
327	ABFJV Field Work	All ABFJV Field work and subcontractor support, incl.: - Mob. and demob. access/falsework/platforms, etc. - Field work and subcontractor support - Survey, testing, and QC - Install steel saddle (set, grout into place, etc.) - Final field paint and touch-up	ABFJV	EWFA	$ 2,000,000.00	$ 1,305,000.00	$ 450,000.00		5/21/13		$ 767,396.00	To TBPOC June 6, 2013 meeting for approval
328	Bar Reinforcing Steel	Furnish and place rebar	Harris Salinas	EWFA	$ 500,000.00	$ 844,000.00					$ 110,158.00	
330	Post Tensioning	Furnish strand/anchors, install, stress, grout, etc	Schwager Davis	EWFA	$ 1,000,000.00	$ 630,000.00						
	Subtotal				**$ 6,350,000.00**	**$ 5,087,000.00**	**$ 2,800,000.00**				**$ 1,627,400.00**	
Fabrication												
313	Shear Key Materials	Procuring the necessary long lead time materials for Pier E2 Shear Keys 1 & 2 steel saddle.	Leeco, XKT Evraz	EWFA	$ 1,500,000.00	$ 1,500,000.00	$ 1,500,000.00		4/19/2013 5/21/13		$ 1,455,566.12	To TBPOC June 6, 2013 meeting for approval
319	E2 Shear Key Fabrication	Fabricate steel saddle	XKT	EWFA	$ 2,000,000.00	$ 1,040,000.00						
	Subtotal				**$ 3,500,000.00**	**$ 2,540,000.00**	**$ 1,500,000.00**				**$ 1,455,566.12**	
	Subtotal (Field Work & Fabrication)				**$ 9,850,000.00**	**$ 7,627,000.00**	**$ 4,300,000.00**				**$ 3,082,966.12**	
	***TBPOC Approved Expenditure (Field Work & Fabrication)**						**$ 4,300,000.00**					
	Remaining Funds from TBPOC Approved Expenditure (Field Work & Fabrication)						**$ -**					
Testing/ Rod Replacement												
312	Furnish Anchor Rods	Furnishing twenty (20) replacement ASTM A354 Grade BD anchor bolt assemblies for the Pier E2 Crossbeam Shear Keys and Orthotropic Box Girder (OBG) Bearings. Performing one embrittlement test per anchor bolt lot on the full size diameter threaded section.	Dyson	EWFA	$ 150,000.00		$ 150,000.00		4/19/13 4/24/13		$118,375.40	Dyson= $107,614 (does not include embrittlement test)
314	Remove, Replace & Test Sample Rods	-Removing anchor rods from Pier E2 shear keys and bearings. Retensioning the selected rods to 0.75 Fu, re-securing the nut, and then letting the rods sit for a period of 24 hours prior to removal. At an independent testing laboratory, loading the removed rods to failure. -Removing galvanizing from the top of shear key and bearing rods. After the Department has performed hardness tests on the rods, replacing the galvanizing that was removed with inorganic zinc primer. -Removing and test anchor rod from Tower -Wet Test -Removal of the following rods: S3 Rod D2, S4 Rod E2,B1 Rod F4, B2 Rod F5 -Removing galvanizing from the top of194/388 3" tower anchor rods and 36/36 4" tower rods -Procure and fabricate materials for the test rig for wet test as detailed in the attached plan sheets	ABFJV + subs (Carpenter Rigging, etc)	EWFA	$ 500,000.00		$ 200,000.00		4/19/13 5/3/13 (email) 5/6/13 5/7/13 5/21/13 5/23/13 (2ATPs)		$30,800.00	-Carpenter Rigging $28,000 -Obtaining quote for stress-corrosion apparatus from XKT
	Subtotal				**$ 650,000**		**$ 350,000.00**				**$ 149,175.40**	
	****TBPOC Approved Expenditure**						**$ 1,000,000.00**					
	Remaining Funds from TBPOC Approved Expenditure						**$ 650,000.00**					

*4/11/13 TBPOC Meeting: TBPOC approved an expenditure of up to $4.3M to (1) purchase replacement rods, (2) secure long lead materials fo retrofit strategy B and C, and (3) to keep retrofit strategy A in play, but not to spend any of the approved $ on it.

**5/9/13 TBPOC Meeting: TBPOC Meeting- The TBPOC approved a not-to-exceed amount of $1 M for the wet test of 2010 bolts, and revised the April 11 approval for the $4.3 M expenditure to include all E2 shear key anchor bolt activities. See meeting minutes.

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** June 3, 2013

FR: Tony Anziano, Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5a2

Item- San Francisco-Oakland Bay Bridge Updates
E2 Update
A354 Grade BD Anchor Rod Testing Program Update.

Recommendation:
For Information Only

Cost:
May 9th TBPOC Budget Authorization: $1,000,000.00

Schedule Impacts:
TBD – The potential impacts to Seismic Safety Opening will be evaluated as the testing program progresses.

Discussion:
As authorized by the TBPOC, the Department has established a testing program to determine the adequacy of the A354 Grade BD anchor rods installed in the SAS Structure. The status of that program is as follows:

I. In-situ Test (Field Hardness Testing)
   a. Work in progress
II. Lab Testing (Hardness, Charpy V Notch, Chemistry)
   a. Work in progress
III. Full Size Lab Testing:
   a. Samples have been identified
   b. Testing facility to be identified (Stress Engineering Inc. Houston, TX)
IV. Stress Corrosion Test:
   a. Test rig design has been sent to the Contractor
   b. Location on Pier 7 has been selected
   c. Procurement of materials are in progress

Detailed progress information for all 17 locations that contain A354 Grade BD anchor rods is shown on attached SAS A354 BD Bolt Test schedule.

Risk Management:

The SAS risk register is carrying the risk - "B/D Rods at the Bearings of Pier E2 & Misc Locations (2010)" in the range of $500K to $6.5M to test the remaining A354 B/D rods.

Delays to bridge opening should they occur are not considered in these risks but are captured to the extent they were known in March 2013 in the risk "Schedule Delays to Seismic Safety Opening".

Attachment(s):

SAS A354BD Bolt Tests Sheet

SAS A354BD Bolt Tests - 6/2/13 Update (DRAFT)

ID	Priority	Structural Component	Number of Bolts	Nominal Bolt Diameter [in]	Sustained Bolt Tension % Fu (UTS)	Testing Plan - Number of samples to test							
						I (*in-situ* test)		II (lab test) (Note 1)		III (full size)		IV (test)	
						Number Tests Planned	(%Completed)	Number Tests Planned	(%Completed)	Number Tests Planned	(%Completed)	Number Tests Planned	(%Completed)
1	TBD	Shear Key Anchor Bolts- Bottom (S1/S2)	96	3	0.70	TBD	0%	TBD		TBD		TBD	
2	A	Shear Key Anchor Bolts- Bottom (S3/S4)	96	3	0.70	90	100%	-	-	2**	100%	2	0%
	A	Pier E2 Bearing Bolts- Bottom Housing (B1, B2, B3, B4)	96	3	0.70	74	100%	-	-	2**	100%	2	0%
3	A	Shear Key Anchor Bolts-Top (S1/S2)	160	3	0.70	160	60%	6 (spares)	0%	2 (spares)	0%	-	-
	A	Shear Key Anchor Bolts-Top (S3/S4)	160	3	0.70	160	60%	6 (spares)	0%	2 (spares)	0%	-	-
4	A	Pier E2 Bearing Bolts- Top Housing (B1,B2,B3,B4)	224	2	0.70	224	100%	7 (spares)	0%	2 (spares)	0%	1 (spare)	0%
5	-	Spherical Bearing Bushing Assembly Bolts	96	1	0.61	-	-	-	-	-	-	-	-
6	-	Bearing Retainer Ring Plate Assembly Bolts	336	1	0.40	-	-	-	-	-	-	-	-
7	B	PWS Strand Anchor Rods (Main Cable)	274	3-1/2	0.32	270 (Note 2)	0%	43	0%	1 (spare)	0%	4***	0%
8	C	Tower Saddle Tie Rods	25	4	0.68	19 (Note 3)	0%	2 (spare)	0%	1 (spare)	0%	1 (spare)	0%
9	D	Tower Saddle Turned Rods (@ Splices)	100	3	0.45	20	0%	2	0%	-	-	-	-
	D	Tower Saddle Turned Rods (@ Splices)	8	3	0.10	-	-	-	-	-	-	-	-
10	-	Tower Saddle Grillage Bolts	90	3	0.10	-	-	-	-	-	-	-	-
11	D	Tower Outrigger	4	3	0.10	-	-	-	-	1 (spare)	0%	-	-
12	C	Tower Anchorage Anchor Bolts (75 Dia. Anchor Bolts)	388	3	0.48	228	10%	8 (Note 5)	0% (1 sample sent to lab)	1 (Note 7)	0%	1 (Note 7)	0%
13	C	Tower Anchorage Anchor Bolts (100 Dia. Anchor Bolts)	36	4	0.37	36	30%	4 (Note 5)	0%	-	-	-	-
14	D	East Saddle Anchor Rods	32	2	0.10	16	0%	2 (Notes 4 &7)	0% (2 samples sent to lab)	1 (spare)	0%	-	-
15	D	East Saddle Tie Rods	18	3	0.20	9	0%	1	0%	-	-	-	-
16	D	Cable Bracket Anchor Rods	24	3	0.16	12	0%	(Note 6)	-	-	-	-	-
17	E	Bikepath Anchor Bolts at Pier W2	43	1-1/4	0.10	9	0%	1	0%	-	-	-	-

** Tests completed

*** 2 rolled thread samples & 2 cut thread samples

Notes:

1. Test at least one sample from each heat for Test II
2. Cut-off drill and tap hole @ end for testing. Sample lengths to be provided in separate attachment.
3. Test top surface of hex @ end of rod.
4. No Charpy tests due to limited available rod stick-out.
5. Samples for lab test II shall be taken after tests I, III and IV are completed, except for some samples that can be taken earlier.
6. Same heat as PWS, no sampling necessary.
7. Sample already removed.

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** June 3, 2013

FR: Tony Anziano, Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5a3

Item- San Francisco-Oakland Bay Bridge Updates
Self-Anchored Suspension Span – Pier E2 Shear Key S1 & S2
Anchorage Contract Change Orders Nos. 313, 320, 325, 326, and 327

Recommendation:
APPROVAL

Cost:

CCO 313:	$1,500,000.00	Shear Key Materials
CCO 320:	$100,000.00	Temporary Bearing Shimming (ABFJV)
CCO 325:	$750,000.00	Concrete Demolition (Conco)
CCO 326:	$1,500,000.00	Concrete Coring (Penhall)
CCO 327:	$ 450,000.00	ABFJV Field/Support Work
Total:	$4,300,000.00	

Schedule Impacts:
Discussions with the Contractor on possible impacts to seismic safety opening (SSO) are in progress.

Field work: Progressing 6 to 7 days per week, 10 to 12 hours per day.

Fabrication: Material procurement, preparation of welding quality control plans, and shop drawings are all under way.

Discussion:
Contract Change Order (CCO) Nos. 313, 320, 325, 326, and 327 provide for the Pier E2 concrete cap shear key S1 & S2 anchorage work as follows: CCO 313 procures shear key saddle steel materials, CCO 320 provides for steel shimming of the temporary construction bearings due to their longer service life, CCO 325 provides for concrete demolition work for shear key saddles, concrete cap vertical face construction joint surface roughening & cut outs, CCO 326 provides for post-tensioning duct concrete coring through the E2 concrete cap, and CCO 327 provides for temporary work platforms and ABFJV field support work required for all the shear key S1 & S2 anchorage work changes. The cumulative totals for these CCO's do not exceed the

previously approved TBPOC Pier E2 budget of $4.3M. However, as these CCO's are anticipated to be issued as time and material changes, additional funds may be required.

A separate TBPOC memo will provide for an overall Pier E2 Shear Key S1 & S2 Anchorage budget authorization request and future CCO schedule.

Risk Management:

The SAS risk register is carrying the risk "Fabrication and Installation of a bracket to secure shear keys to Pier E2" in the range of $8M to $15M for the work related to fabricating and installing a retrofit to act in the place of the A354 B/D rods manufactured in 2008.

Delays to bridge opening should they occur are not considered in these risks but are captured to the extent they were known in March 2013 in the risk "Schedule Delays to Seismic Safety Opening".

Attachment(s):

1. Draft CCOs & CCO Memos: 313, 320, 325, 326, and 327
2. CCO Work Photo Description

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 313 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Extra Work at Force Account:

As directed by the Engineer, procure long lead time materials for saddle tie down at Pier E2 Shear Keys S1 and S2.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with the provisions of Section 4-1.03D, "Extra Work" of the Standard Specifications and Section 5-1.24, "Force Account Payment" of the Special Provisions.

Estimated Cost of Extra Work at Force Account $1,500,000.00

Estimated Cost: Increase ☒ **Decrease** ☐ **$1,500,000.00**

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature	**Resident Engineer** William Casey, Supervising T.E.	**Date**

Approval Recommended by

Signature	**Program Manager** Tony Anziano, Program Manager	**Date**

Engineer Approval by

Signature	**Program Manager** Tony Anziano, Program Manager	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: May 13, 2013

TO: Tony Anziano, Project Manager			FILE **04-0120F4** 04-SF-80-13.2, 13.9
FROM Darryl Schram, Senior T.E.			
CCO NO. **313**	SUPPLEMENT NO. **0**	CATEGORY CODE	CONTINGENCY BALANCE (including this change)
$1,500,000.00 INCREASE ☒ DECREASE ☐			HEADQUARTERS APPROVAL REQUIRED? YES ☒ NO ☐
SUPPLEMENTAL FUNDS PROVIDED: CCO Description: Shear Keys S1/S2 Retrofit Materials			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES ☒ NO ☐

DRAFT

THIS CHANGE ORDER PROVIDES FOR:

Procuring long lead time materials for saddle tie down at Pier E2 Shear Keys S1 and S2.

Contract Plan Sheets 884R1 “Pier E2 Bearing Details No. 2” and 887R2 “Pier E2 Shear Key Details No. 1” identify the anchor bolts for the Pier E2 Shear Keys and Bearings as 76 mm A354 Grade BD Bolts. These plan sheets require the bolts to be tensioned to 0.70 Fu (70% of their ultimate strength). Special Provisions Sections 10-1.47 “Spherical Bushing Bearing (Pier E2)” and 10-1.50 “Shear Key (Pier E2)” provide the specification requirements for the anchor bolts. Both of these specifications refer you to Special Provision Section 10-1.59 “Steel Structures” which in turn refers you to various ASTM specifications including ASTMs A123, A153, A143, A354, etc. which provide further specifications for the manufacture and testing of the anchor bolts and hardware. While these references provide for the final mechanical properties and processes for the manufacture of the bolts, they do not specifically require hydrogen embrittlement testing for the anchor bolts.

Within days after tensioning was performed, the anchor bolts in the shear keys directly below the Eastbound and Westbound OBG structures (known as Shear Keys S1 and S2) began to fail. A total of 32 out of the 96 anchor bolts broke before the Department directed the Contractor to reduce the anchor bolt tension to prevent further failures. A forensic metallurgic examination was jointly performed with both the Contractor’s and Materials Engineering and Testing Services’ (METS) metallurgical experts. It was determined that while the failed bolts’ material properties did meet the contract specifications, the hardness properties were at the upper limit and the ductility and toughness properties were at the lower limit. Taking this high end hardness and low end ductility into account and combining it with a high tensile stress (0.70 Fu) makes this material more susceptible to the effects of hydrogen cracking (also known as hydrogen embrittlement). The metallurgical examination indicated that the bolts were susceptible to hydrogen embrittlement due to a lack of uniformity in the microstructure of the rods. While this issue continues to remain under investigation, the Toll Bridge Project Oversight Committee (TBPOC) has for the time being tabled the discussion of contractual responsibility for the failures and chosen to focus on the solution in order to ensure the project stays on track to achieving seismic safety.

The anchor bolts at Shear Keys S1 and S2 are uniquely different from the anchor bolts at the remaining shear keys and bearings (known as Shear Keys S3 and S4 and Bearings B1, B2, B3, and B4) in that they were manufactured in 2008 as opposed to the remaining ones in 2010. In addition, due to physical limitations the anchor bolts at Shear Keys S1 and S2 have their anchors fully cast into the Pier E2 cap and are not replaceable, as opposed to the remaining shear keys and bearings which are thru bolted and thus replaceable. As such, Shear Keys S1 and S2 will require an alternate anchorage solution.

In an effort to move forward, multiple change orders will be issued for the alternate shear key solution with direction provided by the Toll Bridge Project Oversight Committee (TBPOC) at the April 11, 2013 meeting including furnishing replacements for rods removed for testing (CCO 312) and procuring long lead time materials (CCO 313). The total approval for the early work was $4.3 million. Since that time, not all of the funds have been required for the early work. In an effort to keep progression of the shear key work moving and until such time as the TBPOC decides to approve additional funding, the TBPOC at the May 9, 2013 meeting clarified this approval to extend beyond the early work to include all other E2 shear key anchorage activities within the approved $4.3 million funding authorization. The following change orders will be issued, up to the limited dollar approval, to allow the Contractor to start the work until such time that the full scope is approved by the TBPOC: fabricating saddles (CCO 319), shimming temporary bearings (CCO 320), performing concrete and rebar demolition of Pier Cap E2 (CCO 325), core drilling for through-cap tendons (CCO 326), installing temporary work platforms, falsework, and saddles (CCO 327), furnishing and installing reinforcing bars (CCO 328), placing shear key concrete (CCO 329), and furnishing and installing post tensioning (CCO 330).

This change order will procure long lead time materials for the work to fabricate the steel post-tensioning saddles required for the Pier E2 shear key S1 & S2 saddle anchorage. The installation of the steel saddles will performed under a separate change order.

The total cost of this change order is $1,500,000.00 force account, which can be financed from the contingency fund. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order will obtain concurrence from William Casey (Supervising TE), Tony Anziano (Program Manager), Rich Foley (HQ Oversight), Wenyi Long (Bridge Design), Lina Ellis (Maintenance), and Jing Chen (District Design).

Toll Bridge Program Oversight Committee (TBPOC) initially approved change orders be issued for the Pier E2 shear key anchorage on April 11, 2013 with revision on May 9, 2013, in the amount of not to exceed $4,300,000.00.

CONCURRED BY:		**ESTIMATE OF COST**	
STRUCTURE REPRESENTATIVE	DATE	THIS REQUEST	TOTAL TO DATE
SR. BRIDGE ENGINEER	DATE	ITEMS	
		FORCE ACCOUNT	
FHWA REPRESENTATIVE	DATE	AGREED PRICE	
		ADJUSTMENT	
PROJECT ENGINEER			
OTHER (SPECIFIY)		**FEDERAL PARTICIPATION**	
		☐ PARTICIPATING ☐ PARTICIPATING IN PART ☒ NONE	
		☐ PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
		☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS	
DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
HQ (ISSUE & APPROVE) (TO PROCEED) BY	DATE		
RESIDENT ENGINEER SIGNATURE	DATE		

This part updated by CadB

HC-39 Word(Rev.9/96)

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 320 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be pa count.)
Unless otherwise stated, rates for rental of equipment cover only such ti ast
percentage shown is the net accumulated increase or decrease from the

DRAFT

Extra Work at Lump Sum:

Furnish and install shim plates for the temporary bearings at Pier E2.

The following revised plan sheets detail the changes addressed in this change order: 976S1 and 976S2 (of 1204) as shown on sheets 2 through 3 of this change order.

This change order resolves the costs associated with Contractor Request for Information (RFI) number 3242 with respect to changes listed above.

For this work, the Contractor will receive a lump sum price of $TBD.00. This sum constitutes full and complete compensation for furnishing all labor, material, tools and incidentals including all markups by reason of this change.

Extra Work at Lump Sum.....$100,000.00

Estimated Cost: Increase ☒ Decrease ☐ $TBD.00

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature	**Resident Engineer** Darryl Schram, Senior T.E.	**Date**

Approval Recommended by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

Engineer Approval by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: May 15, 2013

TO: Tony Anziano, Project Manager			FILE **04-0120F4** 04-SF-80-13.2, 13.9
FROM Darryl Schram, Senior T.E.			
CCO NO. **320**	SUPPLEMENT NO. **0**	CATEGORY CODE	CONTINGENCY BALANCE (including this change)
$100,000.00 INCREASE ☒ DECREASE ☐			HEADQUARTERS APPROVAL REQUIRED? YES ☐ NO ☒
SUPPLEMENTAL FUNDS PROVIDED: CCO Description: Temporary Bearing Shimming			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES ☒ NO ☐

DRAFT

THIS CHANGE ORDER PROVIDES FOR:

Furnishing and installing shim plates for the temporary bearings at Pier E2.

Contract Plan Sheets 884R1 “Pier E2 Bearing Details No. 2” and 887R2 “Pier E2 Shear Key Details No. 1” identify the anchor bolts for the Pier E2 Shear Keys and Bearings as 76 mm A354 Grade BD Bolts. These plan sheets require the bolts to be tensioned to 0.70 Fu (70% of their ultimate strength). Special Provisions Sections 10-1.47 “Spherical Bushing Bearing (Pier E2)” and 10-1.50 “Shear Key (Pier E2)” provide the specification requirements for the anchor bolts. Both of these specifications refer you to Special Provision Section 10-1.59 “Steel Structures” which in turn refers you to various ASTM specifications including ASTMs A123, A153, A143, A354, etc. which provide further specifications for the manufacture and testing of the anchor bolts and hardware. While these references provide for the final mechanical properties and processes for the manufacture of the bolts, they do not specifically require hydrogen embrittlement testing for the anchor bolts.

Within days after tensioning was performed, the anchor bolts in the shear keys directly below the Eastbound and Westbound OBG structures (known as Shear Keys S1 and S2) began to fail. A total of 32 out of the 96 anchor bolts broke before the Department directed the Contractor to reduce the anchor bolt tension to prevent further failures. A forensic metallurgic examination was jointly performed with both the Contractor’s and Materials Engineering and Testing Services’ (METS) metallurgical experts. It was determined that while the failed bolts’ material properties did meet the contract specifications, the hardness properties were at the upper limit and the ductility and toughness properties were at the lower limit. Taking this high end hardness and low end ductility into account and combining it with a high tensile stress (0.70 Fu) makes this material more susceptible to the effects of hydrogen cracking (also known as hydrogen embrittlement). The metallurgical examination indicated that the bolts were susceptible to hydrogen embrittlement due to a lack of uniformity in the microstructure of the rods. While this issue continues to remain under investigation, the Toll Bridge Project Oversight Committee (TBPOC) has for the time being tabled the discussion of contractual responsibility for the failures and chosen to focus on the solution in order to ensure the project stays on track to achieving seismic safety.

The anchor bolts at Shear Keys S1 and S2 are uniquely different from the anchor bolts at the remaining shear keys and bearings (known as Shear Keys S3 and S4 and Bearings B1, B2, B3, and B4) in that they were manufactured in 2008 as opposed to the remaining ones in 2010. In addition, due to physical limitations the anchor bolts at Shear Keys S1 and S2 have their anchors fully cast into the Pier E2 cap and are not replaceable, as opposed to the remaining shear keys and bearings which are thru bolted and thus replaceable. As such, Shear Keys S1 and S2 will require an alternate anchorage solution.

In an effort to move forward, multiple change orders will be issued for the alternate shear key solution with direction provided by the Toll Bridge Project Oversight Committee (TBPOC) at the April 11, 2013 meeting including furnishing replacements for rods removed for testing (CCO 312) and procuring long lead time materials (CCO 313). The total approval for the early work was $4.3 million. Since that time, not all of the funds have been required for the early work. In an effort to keep progression of the shear key work moving and until such time as the TBPOC decides to approve additional funding, the TBPOC at the May 9, 2013 meeting clarified this approval to extend beyond the early work to include all other E2 shear key anchorage activities within the approved $4.3 million funding authorization. The following change orders will be issued, up to the limited dollar approval, to allow the Contractor to start the work until such time that the full scope is approved by the TBPOC: fabricating saddles (CCO 319), shimming temporary bearings (CCO 320), performing concrete and rebar demolition of Pier Cap E2 (CCO 325), core drilling for through-cap tendons (CCO 326), installing temporary work platforms, falsework, and saddles (CCO 327), furnishing and installing reinforcing bars (CCO 328), placing shear key concrete (CCO 329), and furnishing and installing post tensioning (CCO 330).

The temporary bearings at Pier E2 were designed to support the roadway structure during the originally planned construction activities. With the longer duration that they will be required to remain in service, this change order will install shims to increase capacity for the extended use of the temporary bearings to support the bridge structure during the work to construct the alternate Pier E2 shear key S1 & S2 saddle anchorage.

This change order resolves the costs associated with Contractor Request for Information (RFI) number 3242 with respect to changes listed above.

The total cost of this change order is $100,000.00 lump sum, which can be financed from the contingency fund. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order will obtain concurrence from William Casey (Supervising TE), Rich Foley (HQ Oversight), and Ade Akinsanya (Bridge Design).

Toll Bridge Program Oversight Committee (TBPOC) initially approved change orders be issued for the Pier E2 shear key anchorage on April 11, 2013 with revision on May 9, 2013, in the amount of not to exceed $4,300,000.00.

CONCURRED BY:		**ESTIMATE OF COST**	
STRUCTURE REPRESENTATIVE	DATE	THIS REQUEST	TOTAL TO DATE
SR. BRIDGE ENGINEER	DATE	ITEMS	
		FORCE ACCOUNT	
FHWA REPRESENTATIVE	DATE	AGREED PRICE	
		ADJUSTMENT	
PROJECT ENGINEER			
OTHER (SPECIFIY)		**FEDERAL PARTICIPATION**	
		☐ PARTICIPATING ☐ PARTICIPATING IN PART ☒ NONE	
		☐ PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
		☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS	
DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
HQ (ISSUE & APPROVE) (TO PROCEED) BY	DATE		
RESIDENT ENGINEER SIGNATURE	DATE		

This part updated by CadB

HC-39 Word(Rev.9/96)

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 325 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipmen s last percentage shown is the net accumulated increase or decrease from the original quantit

DRAFT

Extra Work at Force Account:

As directed by the Engineer, perform concrete and rebar demolition on Pier Cap E2 in accordance with Contract Change Order 331 “Pier E2 Plans”.

This change order resolves the costs associated with Contractor Request for Information (RFI) numbers 3297, 3304R0, and 3305 with respect to changes listed above.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with the provisions of Section 4-1.03D, “Extra Work” of the Standard Specifications and Section 5-1.24, “Force Account Payment” of the Special Provisions.

Estimated Cost of Extra Work at Force Account $750,000.00

Estimated Cost: Increase ☒ Decrease ☐ $TBD.00

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature	**Resident Engineer** Darryl Schram, Senior T.E.	**Date**

Approval Recommended by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

Engineer Approval by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: May 29, 2013

TO: Tony Anziano, Project Manager			FILE: **04-0120F4** 04-SF-80-13.2, 13.9
FROM: Darryl Schram, Senior T.E.			
CCO NO. **325**	SUPPLEMENT NO. **0**	CATEGORY CODE	CONTINGENCY BALANCE (including this change)
$750,000.00 INCREASE ☒ DECREASE ☐			HEADQUARTERS APPROVAL REQUIRED? YES ☒ NO ☐
SUPPLEMENTAL FUNDS PROVIDED: CCO Description: Pier E2 Concrete Demolition			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES ☒ NO ☐

DRAFT

THIS CHANGE ORDER PROVIDES FOR:

Perform concrete and rebar demolition on Pier Cap E2.

Contract Plan Sheets 884R1 “Pier E2 Bearing Details No. 2” and 887R2 “Pier E2 Shear Key Details No. 1” identify the anchor bolts for the Pier E2 Shear Keys and Bearings as 76 mm A354 Grade BD Bolts. These plan sheets require the bolts to be tensioned to 0.70 Fu (70% of their ultimate strength). Special Provisions Sections 10-1.47 “Spherical Bushing Bearing (Pier E2)” and 10-1.50 “Shear Key (Pier E2)” provide the specification requirements for the anchor bolts. Both of these specifications refer you to Special Provision Section 10-1.59 “Steel Structures” which in turn refers you to various ASTM specifications including ASTMs A123, A153, A143, A354, etc. which provide further specifications for the manufacture and testing of the anchor bolts and hardware. While these references provide for the final mechanical properties and processes for the manufacture of the bolts, they do not specifically require hydrogen embrittlement testing for the anchor bolts.

Within days after tensioning was performed, the anchor bolts in the shear keys directly below the Eastbound and Westbound OBG structures (known as Shear Keys S1 and S2) began to fail. A total of 32 out of the 96 anchor bolts broke before the Department directed the Contractor to reduce the anchor bolt tension to prevent further failures. A forensic metallurgic examination was jointly performed with both the Contractor’s and Materials Engineering and Testing Services’ (METS) metallurgical experts. It was determined that while the failed bolts’ material properties did meet the contract specifications, the hardness properties were at the upper limit and the ductility and toughness properties were at the lower limit. Taking this high end hardness and low end ductility into account and combining it with a high tensile stress (0.70 Fu) makes this material more susceptible to the effects of hydrogen cracking (also known as hydrogen embrittlement). The metallurgical examination indicated that the bolts were susceptible to hydrogen embrittlement due to a lack of uniformity in the microstructure of the rods. While this issue continues to remain under investigation, the Toll Bridge Project Oversight Committee (TBPOC) has for the time being tabled the discussion of contractual responsibility for the failures and chosen to focus on the solution in order to ensure the project stays on track to achieving seismic safety.

The anchor bolts at Shear Keys S1 and S2 are uniquely different from the anchor bolts at the remaining shear keys and bearings (known as Shear Keys S3 and S4 and Bearings B1, B2, B3, and B4) in that they were manufactured in 2008 as opposed to the remaining ones in 2010. In addition, due to physical limitations the anchor bolts at Shear Keys S1 and S2 have their anchors fully cast into the Pier E2 cap and are not replaceable, as opposed to the remaining shear keys and bearings which are thru bolted and thus replaceable. As such, Shear Keys S1 and S2 will require an alternate anchorage solution.

In an effort to move forward, multiple change orders will be issued for the alternate shear key solution with direction provided by the Toll Bridge Project Oversight Committee (TBPOC) at the April 11, 2013 meeting including furnishing replacements for rods removed for testing (CCO 312) and procuring long lead time materials (CCO 313). The total approval for the early work was $4.3 million. Since that time, not all of the funds have been required for the early work. In an effort to keep progression of the shear key work moving and until such time as the TBPOC decides to approve additional funding, the TBPOC at the May 9, 2013 meeting clarified this approval to extend beyond the early work to include all other E2 shear key anchorage activities within the approved $4.3 million funding authorization. The following change orders will be issued, up to the limited dollar approval, to allow the Contractor to start the work until such time that the full scope is approved by the TBPOC: fabricating saddles (CCO 319), shimming temporary bearings (CCO 320), performing concrete and rebar demolition of Pier Cap E2 (CCO 325), core drilling for through-cap tendons (CCO 326), installing temporary work platforms, falsework, and saddles (CCO 327), furnishing and installing reinforcing bars (CCO 328), placing shear key concrete (CCO 329), and furnishing and installing post tensioning (CCO 330).

This change order will demolish concrete and rebar in order to provide access to install the post-tensioning saddle tie down and prepare the concrete cap vertical construction joint face for the Pier E2 shear key S1 & S2 saddle anchorage.

The total cost of this change order is $750,000.00 force account, which can be financed from the contingency fund. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order will obtain concurrence from William Casey (Supervising TE), Rich Foley (HQ Oversight), Wenyi Long (Bridge Design), Lina Ellis (Maintenance), and Jing Chen (District Design).

Toll Bridge Program Oversight Committee (TBPOC) initially approved change orders be issued for the Pier E2 shear key anchorage on April 11, 2013 with revision on May 9, 2013, in the amount of not to exceed $4,300,000.00.

CONCURRED BY:		**ESTIMATE OF COST**	
STRUCTURE REPRESENTATIVE	DATE	THIS REQUEST	TOTAL TO DATE
SR. BRIDGE ENGINEER	DATE	ITEMS	
		FORCE ACCOUNT	
FHWA REPRESENTATIVE	DATE	AGREED PRICE	
		ADJUSTMENT	
PROJECT ENGINEER			
OTHER (SPECIFIY)		**FEDERAL PARTICIPATION**	
		☐ PARTICIPATING ☐ PARTICIPATING IN PART ☒ NONE	
		☐ PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
		☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS	
DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
HQ (ISSUE & APPROVE) (TO PROCEED) BY	DATE		
RESIDENT ENGINEER SIGNATURE	DATE		

This part updated by CadB

HC-39 Word(Rev.9/96)

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 326 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipmen s last percentage shown is the net accumulated increase or decrease from the original quantit

DRAFT

Extra Work at Force Account:

As directed by the Engineer, core drill through Pier Cap E2 in accordance with Contract Change Order 331 "Pier E2 Plans".

This change order resolves the costs associated with Contractor Request for Information (RFI) number 3304R1 with respect to changes listed above.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with the provisions of Section 4-1.03D, "Extra Work" of the Standard Specifications and Section 5-1.24, "Force Account Payment" of the Special Provisions.

Estimated Cost of Extra Work at Force Account $1,500,000.00

Estimated Cost: Increase ☒ Decrease ☐ $TBD.00

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature	**Resident Engineer** Darryl Schram, Senior T.E.	**Date**

Approval Recommended by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

Engineer Approval by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: May 29, 2013

TO: Tony Anziano, Project Manager			FILE: **04-0120F4** 04-SF-80-13.2, 13.9
FROM: Darryl Schram, Senior T.E.			
CCO NO.: **326**	SUPPLEMENT NO.: **0**	CATEGORY CODE:	CONTINGENCY BALANCE (including this change)
$1,500,000.00 INCREASE ☒ DECREASE ☐			HEADQUARTERS APPROVAL REQUIRED? YES ☒ NO ☐
SUPPLEMENTAL FUNDS PROVIDED: CCO Description: Pier E2 Concrete Coring			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES ☒ NO ☐

DRAFT

THIS CHANGE ORDER PROVIDES FOR:

Core drilling through Pier Cap E2.

Contract Plan Sheets 884R1 “Pier E2 Bearing Details No. 2” and 887R2 “Pier E2 Shear Key Details No. 1” identify the anchor bolts for the Pier E2 Shear Keys and Bearings as 76 mm A354 Grade BD Bolts. These plan sheets require the bolts to be tensioned to 0.70 Fu (70% of their ultimate strength). Special Provisions Sections 10-1.47 “Spherical Bushing Bearing (Pier E2)” and 10-1.50 “Shear Key (Pier E2)” provide the specification requirements for the anchor bolts. Both of these specifications refer you to Special Provision Section 10-1.59 “Steel Structures” which in turn refers you to various ASTM specifications including ASTMs A123, A153, A143, A354, etc. which provide further specifications for the manufacture and testing of the anchor bolts and hardware. While these references provide for the final mechanical properties and processes for the manufacture of the bolts, they do not specifically require hydrogen embrittlement testing for the anchor bolts.

Within days after tensioning was performed, the anchor bolts in the shear keys directly below the Eastbound and Westbound OBG structures (known as Shear Keys S1 and S2) began to fail. A total of 32 out of the 96 anchor bolts broke before the Department directed the Contractor to reduce the anchor bolt tension to prevent further failures. A forensic metallurgic examination was jointly performed with both the Contractor’s and Materials Engineering and Testing Services’ (METS) metallurgical experts. It was determined that while the failed bolts’ material properties did meet the contract specifications, the hardness properties were at the upper limit and the ductility and toughness properties were at the lower limit. Taking this high end hardness and low end ductility into account and combining it with a high tensile stress (0.70 Fu) makes this material more susceptible to the effects of hydrogen cracking (also known as hydrogen embrittlement). The metallurgical examination indicated that the bolts were susceptible to hydrogen embrittlement due to a lack of uniformity in the microstructure of the rods. While this issue continues to remain under investigation, the Toll Bridge Project Oversight Committee (TBPOC) has for the time being tabled the discussion of contractual responsibility for the failures and chosen to focus on the solution in order to ensure the project stays on track to achieving seismic safety.

The anchor bolts at Shear Keys S1 and S2 are uniquely different from the anchor bolts at the remaining shear keys and bearings (known as Shear Keys S3 and S4 and Bearings B1, B2, B3, and B4) in that they were manufactured in 2008 as opposed to the remaining ones in 2010. In addition, due to physical limitations the anchor bolts at Shear Keys S1 and S2 have their anchors fully cast into the Pier E2 cap and are not replaceable, as opposed to the remaining shear keys and bearings which are thru bolted and thus replaceable. As such, Shear Keys S1 and S2 will require an alternate anchorage solution.

In an effort to move forward, multiple change orders will be issued for the alternate shear key solution with direction provided by the Toll Bridge Project Oversight Committee (TBPOC) at the April 11, 2013 meeting including furnishing replacements for rods removed for testing (CCO 312) and procuring long lead time materials (CCO 313). The total approval for the early work was $4.3 million. Since that time, not all of the funds have been required for the early work. In an effort to keep progression of the shear key work moving and until such time as the TBPOC decides to approve additional funding, the TBPOC at the May 9, 2013 meeting clarified this approval to extend beyond the early work to include all other E2 shear key anchorage activities within the approved $4.3 million funding authorization. The following change orders will be issued, up to the limited dollar approval, to allow the Contractor to start the work until such time that the full scope is approved by the TBPOC: fabricating saddles (CCO 319), shimming temporary bearings (CCO 320), performing concrete and rebar demolition of Pier Cap E2 (CCO 325), core drilling for through-cap tendons (CCO 326), installing temporary work platforms, falsework, and saddles (CCO 327), furnishing and installing reinforcing bars (CCO 328), placing shear key concrete (CCO 329), and furnishing and installing post tensioning (CCO 330).

This change order will core drill through concrete in order to provide access to install through-cap tendons for the Pier E2 shear key S1 & S2 saddle anchorage.

The total cost of this change order is $1,500,000.00 force account, which can be financed from the contingency fund. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order will obtain concurrence from William Casey (Supervising TE), Tony Anziano (Program Manager), Rich Foley (HQ Oversight), Wenyi Long (Bridge Design), Lina Ellis (Maintenance), and Jing Chen (District Design).

Toll Bridge Program Oversight Committee (TBPOC) initially approved change orders be issued for the Pier E2 shear key anchorage on April 11, 2013 with revision on May 9, 2013, in the amount of not to exceed $4,300,000.00.

CONCURRED BY:		**ESTIMATE OF COST**	
STRUCTURE REPRESENTATIVE	DATE	THIS REQUEST	TOTAL TO DATE
SR. BRIDGE ENGINEER	DATE	ITEMS	
		FORCE ACCOUNT	
FHWA REPRESENTATIVE	DATE	AGREED PRICE	
		ADJUSTMENT	
PROJECT ENGINEER			
OTHER (SPECIFIY)		**FEDERAL PARTICIPATION**	
		☐ PARTICIPATING ☐ PARTICIPATING IN PART ☒ NONE	
		☐ PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
		☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS	
DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
HQ (ISSUE & APPROVE) (TO PROCEED) BY	DATE		
RESIDENT ENGINEER SIGNATURE	DATE		

This part updated by CadB

HC-39 Word(Rev.9/96)

CONTRACT CHANGE ORDER

Change Requested by: Engineer

CCO: 327 Suppl. No. 0 Contract No. 04 – 0120F4 Road SF-80-13.2/13.9 **FED. AID LOC.:**

To: **AMERICAN BRIDGE/FLUOR ENTERPRISES INC A JOINT VENTURE**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. ***NOTE: This change order is not effective until approved by the Engineer.***

Description of work to be done, estimate of quantities and prices to be paid. (Segregate account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipmen s last percentage shown is the net accumulated increase or decrease from the original quantit

DRAFT

Extra Work at Force Account:

As directed by the Engineer, provide for access, falsework, survey, testing, quality control, subcontractor support, paint and installation of saddles for the Pier E2 saddle installation in accordance with Contract Change Order 331 "Pier E2 Plans".

This change order resolves the costs associated with Contractor Request for Information (RFI) numbers 3302 and 3304R0 with respect to changes listed above.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with the provisions of Section 4-1.03D, "Extra Work" of the Standard Specifications and Section 5-1.24, "Force Account Payment" of the Special Provisions.

Estimated Cost of Extra Work at Force Account $450,000.00

Estimated Cost: Increase ☒ Decrease ☐ $TBD.00

By reason of this order the time of completion will be adjusted as follows: 0 Days

Submitted by

Signature	**Resident Engineer** Darryl Schram, Senior T.E.	**Date**

Approval Recommended by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

Engineer Approval by

Signature	**Supervising Transportation Engineer** William Casey, Supervising T.E.	**Date**

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature	(Print name and title)	**Date**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONTRACT CHANGE ORDER MEMORANDUM

DC-CEM-4903 (OLD HC-39 REV. 6/93) CT# 7541-3544-0

DATE: May 30, 2013

TO: Tony Anziano, Project Manager			FILE: **04-0120F4** 04-SF-80-13.2, 13.9
FROM: Darryl Schram, Senior T.E.			
CCO NO. **327**	SUPPLEMENT NO. **0**	CATEGORY CODE	CONTINGENCY BALANCE (including this change)
$450,000.00 INCREASE ☒ DECREASE ☐			HEADQUARTERS APPROVAL REQUIRED? YES ☒ NO ☐
SUPPLEMENTAL FUNDS PROVIDED: CCO Description: Pier E2 Falsework/Install Saddle			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? YES ☒ NO ☐

DRAFT

THIS CHANGE ORDER PROVIDES FOR:

Providing for access, falsework, survey, testing, quality control, subcontractor support, paint and installation of saddles for the Pier E2 saddle installation

Contract Plan Sheets 884R1 “Pier E2 Bearing Details No. 2” and 887R2 “Pier E2 Shear Key Details No. 1” identify the anchor bolts for the Pier E2 Shear Keys and Bearings as 76 mm A354 Grade BD Bolts. These plan sheets require the bolts to be tensioned to 0.70 Fu (70% of their ultimate strength). Special Provisions Sections 10-1.47 “Spherical Bushing Bearing (Pier E2)” and 10-1.50 “Shear Key (Pier E2)” provide the specification requirements for the anchor bolts. Both of these specifications refer you to Special Provision Section 10-1.59 “Steel Structures” which in turn refers you to various ASTM specifications including ASTMs A123, A153, A143, A354, etc. which provide further specifications for the manufacture and testing of the anchor bolts and hardware. While these references provide for the final mechanical properties and processes for the manufacture of the bolts, they do not specifically require hydrogen embrittlement testing for the anchor bolts.

Within days after tensioning was performed, the anchor bolts in the shear keys directly below the Eastbound and Westbound OBG structures (known as Shear Keys S1 and S2) began to fail. A total of 32 out of the 96 anchor bolts broke before the Department directed the Contractor to reduce the anchor bolt tension to prevent further failures. A forensic metallurgic examination was jointly performed with both the Contractor’s and Materials Engineering and Testing Services’ (METS) metallurgical experts. It was determined that while the failed bolts’ material properties did meet the contract specifications, the hardness properties were at the upper limit and the ductility and toughness properties were at the lower limit. Taking this high end hardness and low end ductility into account and combining it with a high tensile stress (0.70 Fu) makes this material more susceptible to the effects of hydrogen cracking (also known as hydrogen embrittlement). The metallurgical examination indicated that the bolts were susceptible to hydrogen embrittlement due to a lack of uniformity in the microstructure of the rods. While this issue continues to remain under investigation, the Toll Bridge Project Oversight Committee (TBPOC) has for the time being tabled the discussion of contractual responsibility for the failures and chosen to focus on the solution in order to ensure the project stays on track to achieving seismic safety.

The anchor bolts at Shear Keys S1 and S2 are uniquely different from the anchor bolts at the remaining shear keys and bearings (known as Shear Keys S3 and S4 and Bearings B1, B2, B3, and B4) in that they were manufactured in 2008 as opposed to the remaining ones in 2010. In addition, due to physical limitations the anchor bolts at Shear Keys S1 and S2 have their anchors fully cast into the Pier E2 cap and are not replaceable, as opposed to the remaining shear keys and bearings which are thru bolted and thus replaceable. As such, Shear Keys S1 and S2 will require an alternate anchorage solution.

In an effort to move forward, multiple change orders will be issued for the alternate shear key solution with direction provided by the Toll Bridge Project Oversight Committee (TBPOC) at the April 11, 2013 meeting including furnishing replacements for rods removed for testing (CCO 312) and procuring long lead time materials (CCO 313). The total approval for the early work was $4.3 million. Since that time, not all of the funds have been required for the early work. In an effort to keep progression of the shear key work moving and until such time as the TBPOC decides to approve additional funding, the TBPOC at the May 9, 2013 meeting clarified this approval to extend beyond the early work to include all other E2 shear key anchorage activities within the approved $4.3 million funding authorization. The following change orders will be issued, up to the limited dollar approval, to allow the Contractor to start the work until such time that the full scope is approved by the TBPOC: fabricating saddles (CCO 319), shimming temporary bearings (CCO 320), performing concrete and rebar demolition of Pier Cap E2 (CCO 325), core drilling for through-cap tendons (CCO 326), installing temporary work platforms, falsework, and saddles (CCO 327), furnishing and

installing reinforcing bars (CCO 328), placing shear key concrete (CCO 329), and furnishing and installing post tensioning (CCO 330).

This change order will provide for work platform access, falsework, survey, quality control, subcontractor support, and installation of the post-tensioning saddles for the Pier E2 shear key S1 & S2 saddle anchorage.

The total cost of this change order is $450,000.00 force account, which can be financed from the contingency fund. A detailed cost analysis is on file.

No time adjustment is warranted as this change order does not affect the controlling operation.

This change order will obtain concurrence from William Casey (Supervising TE), Rich Foley (HQ Oversight), Wenyi Long (Bridge Design), Lina Ellis (Maintenance), and Jing Chen (District Design).

Toll Bridge Program Oversight Committee (TBPOC) initially approved change orders be issued for the Pier E2 shear key anchorage on April 11, 2013 with revision on May 9, 2013, in the amount of not to exceed $4,300,000.00.

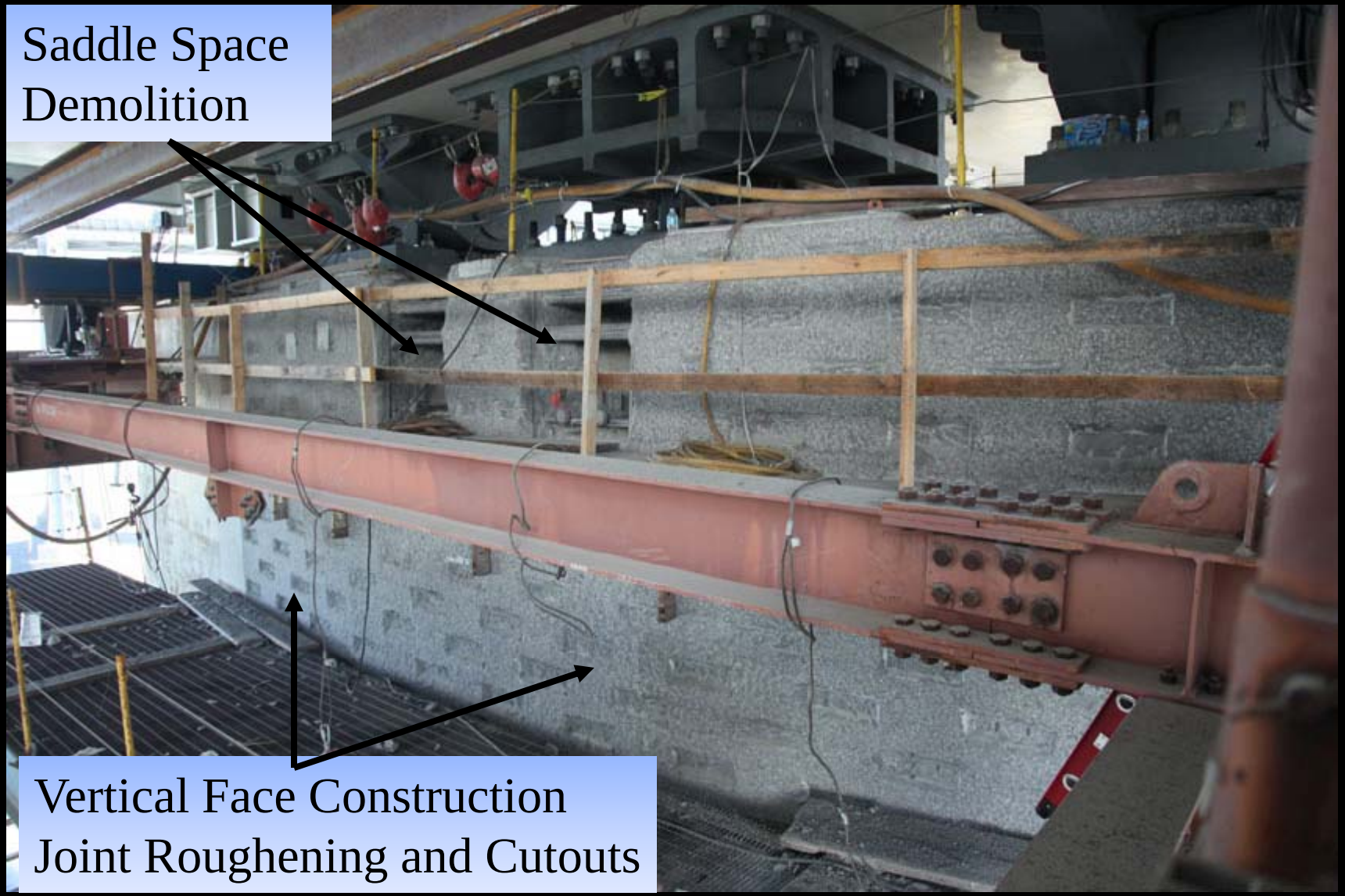
CONCURRED BY:		**ESTIMATE OF COST**	
STRUCTURE REPRESENTATIVE	DATE	THIS REQUEST	TOTAL TO DATE
SR. BRIDGE ENGINEER	DATE	ITEMS	
		FORCE ACCOUNT	
FHWA REPRESENTATIVE	DATE	AGREED PRICE	
		ADJUSTMENT	
PROJECT ENGINEER			
OTHER (SPECIFIY)		**FEDERAL PARTICIPATION**	
		☐ PARTICIPATING ☐ PARTICIPATING IN PART ☒ NONE	
		☐ PARTICIPATING (MAINTENANCE) ☐ NON-PARTICIPATING	
	DATE	FEDERAL SEGREGATION (IF MORE THAN ONE FUNDING SOURCE OR P.I.P. TYPE)	
		☐ CCO FUNDED PER CONTRACT ☐ CCO FUNDED AS FOLLOWS	
DISTRICT PRIOR APPROVAL BY	DATE	FEDERAL FUNDING SOURCE	PERCENT
HQ (ISSUE & APPROVE) (TO PROCEED) BY	DATE		
RESIDENT ENGINEER SIGNATURE	DATE		

This part updated by CadB

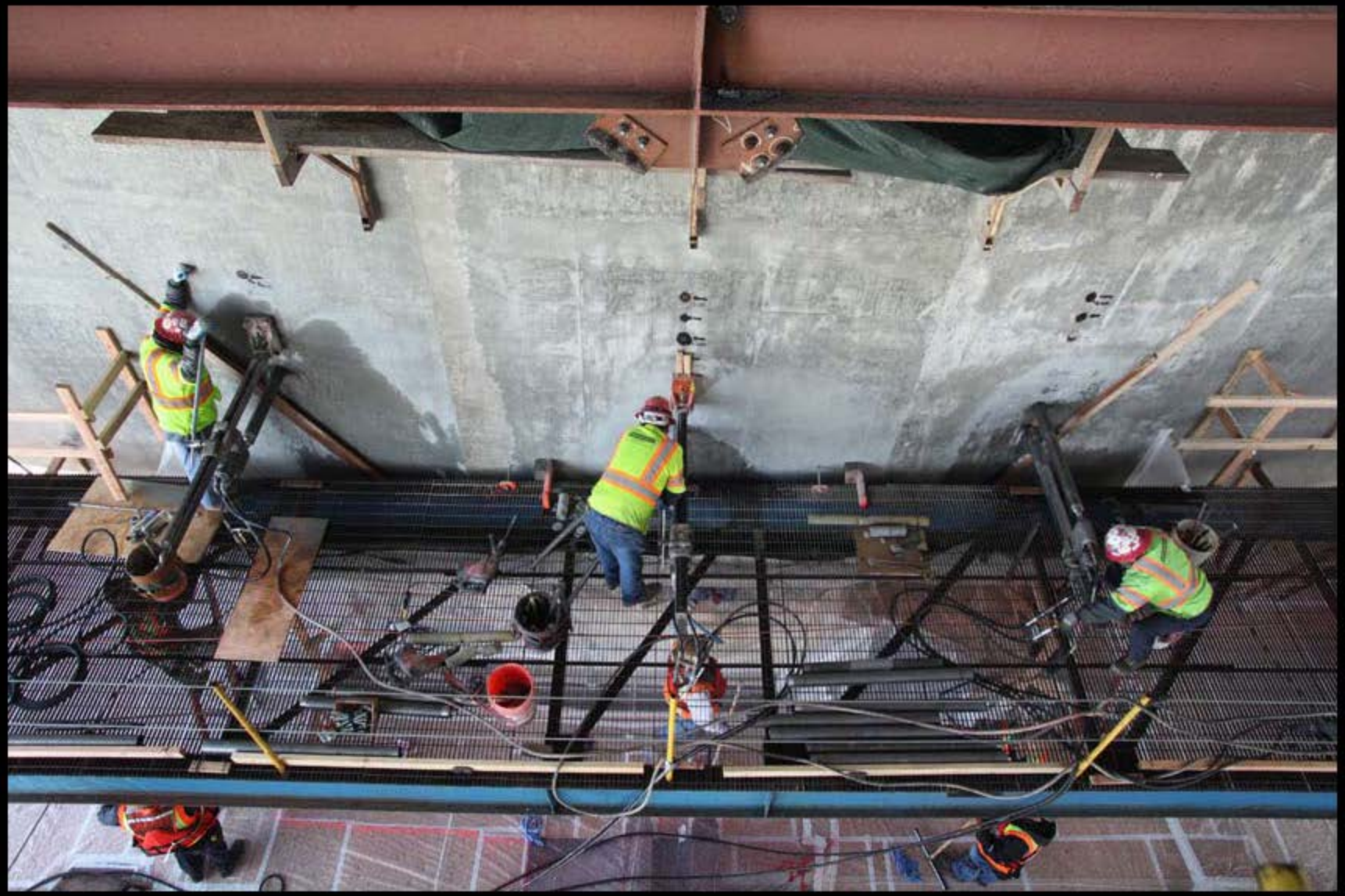
HC-39 Word(Rev.9/96)

CCO 320 – Temporary Bearing Shimming

CCO 325 – Concrete Demolition (Conco)



CCO 326 – Concrete Coring (Penhall)



CCO 327 – ABFJV Field Support Work

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Tony Anziano – Toll Bridge Program Manager, Caltrans

RE: Agenda No. - 5b

Item- San Francisco-Oakland Bay Bridge Updates
Corridor Update / Schedule

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
A verbal corridor update will be provided at the TBPOC meeting on June 6, 2013.

Attached are summary schedules for reference and further discussion at the meeting.

Attachment(s):
1. SAS Project – Forecast
2. Toll Bridge Seismic Retrofit Program – Summary Schedule (SSO)

SAS Project - Forecast

24-May-2013

2012 | 2013 | 2014

1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q

ABF Apr Update
Critical Path
EB Hinge K
ABF Mar Update

DRAFT

1 PWS 1 thru 137 — 4/9A

Ready for SSO — SSO

(CCO 160 SSO Schedule: 8/28/13)

Compaction / Swing-Out/Complete Compaction

2 — 6/23A

3 C.Bands

Suspenders /Jacking System/Compl Weld OBG 12,13,14

4 **Phase 1 Load Transfer** — **9/26A**

Phase 2 Load Transfer: 10/1 A

Phase 3 Load Transfer: 10/8A

3

Erection Tower/FAVCO Removal

5 Install Handropes

W.Loop Handropes

6 Wrap Cables — 11/15

Paint Suspenders — (Paint Upper)

Paint- Main Cables — Punch List

7 Cable Electrical (SSS,NSS,NMS,SMS) — Conductors / Terminations

Remove Catwalk

8 Ph 4 Load Transfer

Hinge A Complete Seismic Joint

9 Install Hinge A EB & WB, and Seismic Jt — **5/14**

Mob / Epoxy AC Trial

EB & WB- Blast/Prime/ Epoxy AC

10

Loop Cable Bands / Saddle Housing

WB- Hinge K -> Removal of Counter Wt. — 12/3

WB Seismic Jt.

Turn Over W2-W4 Milestone

11 **EB Hinge K Turnover W2-W4**

EB- Hinge K

Falsework / Soffit Forms

Bearings/Housing/Support Frame

Soffit Rebar / Pour / Cure

5/10: Complete H.K Seismic Jt.

Hinge K- Pour Stems / Cure

Ballast / Place Deck / Strip Forms — **5/10**

Remove Counter Wt./Install EB Hinge K Seismic Joint

12 **E-2 Shear Key Anchorage(S1&S2)** — **Targeted Completion**

Lifts 13 Deck Plate Drop Ins / Paint Lift 13 & 14 Drop in Plates

Remove Temporary Falsework & Temp. Foundation / Demob.

13

East Anchorage & E2, W2 De-humidification System

Architectural Housing & East Saddle Housing

August 2014
SAS Contract Completion

14 **Bike Path**

Install B.P. Lifts 12 thru 14 / Railing

Traveler Maintenance

17-Jun-13
Forecasted Completion

B.P. Polyester Concrete Overlay

15 **Elevator Fab**

Elevator Installation

Inspection / Punch List

Fabricate & Deliver Elevator

Install Elevator / Punch List

Remove T1ET Tier 1 & 2 & Tower D Fndn

Fender System / Install Tower Skirt

Toll Bridge Seismic Retrofit Program - Summary Schedule (SSO)

5/24/2013

2011 4Q | 2012 1Q 2Q 3Q 4Q | 2013 1Q 2Q 3Q 4Q | 2014 1Q 2Q 3Q 4Q | 2015 1Q 2Q 3Q 4Q | 2016 1Q 2Q 3Q 4Q | 2017 June

SFOBB - SSO - Labor Day 2013 Schedule

SSO * Note: Beneficiary Use

1 YBITS 1 Project- EA 04-0120S4 (Bid: 15-Dec-09, NTP 23-Feb-10)

Frames 1 (WB & EB) / Remove Trestle

Retaining Walls/Ductbank/ EB Temp on-Ramp

WB

EB HK

YBITS 1 Contract Completion

Frames 2 Ready for Hinge K

OH-Ramp Spine / Bike Path / Elect

2 SAS Project - EA 04-0120F4 (Bid: 22-Mar-06, NTP 18-May-06)

WB

EB Hinge K Turn Over

Hinge K Closure Pour (WB & EB) / Joint Seal

5/10

Cable Compaction

C. Bands /Tension

Ph 3 L.T. Wrap Cables

Suspenders / Weld OBG 12,13,14/Jacking Sys.

Ph 2 L.T.

Cable Electrical Conductors

10/1A

Ph 1 Load Transfer

Paint Suspenders / Cable

9/26A

Remove Catwalk

Complete PWS

9/26A

10/8A

PWS Strands 1 - 137

Barrier / Pave / Ready for SSO

SAS Contract Completion

SSO Ready

3 OTD Detour - EA 04-0120S4

Open Temp. WB Lanes

Ph 1 Load Transfer

Ph 3 Load Transfer

4 OTD2 Project - EA 04-0120M4

Re - ADV Bid Award 5/1: Approval

3/12

3/21 3/29A

6/25: 1st Working Day

SSO Ready

OTD 2 Construction

OTD 2 Contract Completion

11/11/12

Coord / Final Striping

SFOBB Bike Path

Open OTD2 Temp. Bike Path

1 2 3 4 5 6

OTD 2- Bike Path

OTD2 Permanent Bike Path

Open YBITS Bike Path

Segment 3- Bike Path (EA # 29227)

Segment 2- Bike Path (EA # 29226)

SFOBB - Dismantling Contracts

5 YBITS 2+ Cant. Dismantling - EA 04-0120T4

Permit: 27-Feb-12

ADV

Outreach

Bid

Award

1st Charged Day

Open YBITS Bike Path

Environmental

4/9

6/14

10/23

11/27A

3/6

Dismantling, Ramp, SG Road, Landing, Bike Path

Contract Completion

HQ

RTL

3/12

11/14

6 504 & 288 Dismantling - Steel Only

DRAFT

ADV

Bid

Award

8/26

11/26

1/25

Start-up Activities

Dismantling - Steel (Draft)

DRAFT

7 All Foundations Removal

Dismantling - Foundations (Draft)

Antioch & Dumbarton Bridge

8 Antioch Bridge - EA 04-1A5214 (Bid: 10-Mar-10, NTP: 19-May-10)

SSO

9 Dumbarton Bridge - EA 04-1A5224 (Bid: 15-Jun-10, NTP: 26-Aug-10)

SSO

Events

DRAFT

Major Schedule Changes Since Last Update are Highlighted below in Yellow

YBITS 1 Project

1 *EB Frame 2 Last Deck Pour: 28-Aug-12A*
2 *EB Frame 2 Stressing Completion: 10-Oct-12A*
3 *EB H.K Turnover W2-W3: 3-Oct-12A (Incentive 17-Oct-12)*
4 *EB H.K Turnover W2-W4: Actual 3-Oct-12 (Incentive 15-Jan-13)*
5 **YBITS 1-Electrical Systems for SSO by Mid Aug 2013**
6 WB & EB SSO Ready: 14-Jul-13 (Max Incentive)

SAS Project

1 *Start PWS: 21-Dec-11 A*
2 *Complete PWS: 9-Apr-12A*
3 Complete Cable Compaction : 22-Jun-2012A (Swing out Area)
4 *Complete Suspenders : 4-Aug-12A*
5 WB Hinge K Soffit Pour: 14-Aug-12
6 *Start Load Transfer: 4-Sep-12A*
7 *Complete Ph 1 Load Transfer: 9/26/12A, Phase 3 10/8/12A*
8 *Complete Cable Wrapping: 25-Jan-13A*
9 ***Epoxy AC Test Strip: 7- May-13A***
10 WB & EB SSO Ready: Max Incentive 28-Aug-13
11 **E-2 Shear Key -S1 & S2- Targeted Compl: Labor Day 2013**

OTD Detour Project

1 *EB Detour Traffic Switch: 29-May-11 A*
2 *WB Detour Traffic Switch: 19-Feb-12A*

OTD2 Project

1 *Advertise: 7-Nov-2011 A, Bid Opening: 18-Jan-2012A*
2 *Re-Advertise: 12-Mar-12A*
3 *Bid Opening: 21-Mar-12A; Award: 29-Mar-12A*
4 *Approval: 1-May-12A, 1st Working Day: 25-Jun-12A*
5 Approach Slab & Hinge FE concrete pours: Week of 6-May-13A
6 Ready for SSO: 11-Nov-12 (Bsln 140 days)
7 **Ready for SSO : End of July 2013**
8 **FWI Coordination w/others: May to August 2013**

Segment 2 & 3 Bike Paths

1 *Seg 2- Adv: 3/212A, Bid Open: 5/112A, Award: 5/31/12*
2 *Segment 2: start: 21-Aug-12A, Completion July 2013*
3 *Segment 3: Start 20-Dec-11A, Completion May 2013*

YBITS 2 + Cantilever Dismantling Project

1 *Receive Biological Opinion : 6-Feb-12A*
2 *BCDC Commission Meeting: 2-Feb-12A*
3 *Permits: 27-Feb-12A, List: 12-Mar-12A*
4 *Advertise: 9-Apr-12A, Bid Opening: 23-Oct-12A*
5 *Award 11/27/12A, Contract Approval: 1/10/13A*
6 **Compl Ramp/ Open YBITS Bike Path: Mid Nov 2014 (A+B Bid)**

504 & 288 Contracts:

Two Contracts
A. Remove 504 & 288 Steel Only
B. Remove All Foundations

Antioch Project

SSO : Apr 2012A , Contract Complete: 13-Jul-12A

Dumbarton Bridge

Replaced 1st Joint: Memorial day week-end Closure
SSO Date: 16-Jan-13A
Contract Complete: April 2013

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** May 31, 2013

FR: Deanna Vilcheck – Area Construction Manager, Caltrans

RE: Agenda No. - 5b1
Item- San Francisco-Oakland Bay Bridge Updates
Labor Day Weekend Construction Schedule

Recommendation:
For Information Only

Cost:
N/A

Schedule Impacts:
N/A

Discussion:
The attached schedule and scope of work will be discussed at the TBPOC meeting on June 6, 2013.

Attachment(s):
1. Labor Day 2013 SFOBB Bridge Closure, August 28, 8PM – September 3, 5AM, Summary Schedule
2. Bridge Closure Traffic Switch Scope of Work

Labor Day 2013 SFOBB Bridge Closure

August 28 - 8PM to September 3 - 5AM

Summary Schedule

31-May-2013 Draft

		Wednesday 28-Aug		Thursday 29-Aug						Friday 30-Aug						Saturday 31-Aug						Sunday 1-Sep						Monday 2-Sep						Tuesday 3-Sep					
		2000	2400	0400	0800	1200	1600	2000	2400	0400	0800	1200	1600	2000	2400	0400	0800	1200	1600	2000	2400	0400	0800	1200	1600	2000	2400	0400	0800	1200	1600	2000	2400	0400	0800	1200	1600	2000	2400
1	West Span Traffic	WB Upper Deck/EB Lower Deck																				Two Way Traffic on Lower Deck												WB Upper Deck EB Lower Deck					
2	Director's Order I580 EB Connector Polyester Overlay and Striping																																						
3	Toll Booth Modifications																																						
4	Westbound																													Temporary Bike Path Open 8 AM									
5	Oakland Touchdown (Location 3) - FWI																																						
6	Barriers (K-rail)																																	Bridge Open 5:00 AM					
7	Grind and Pave									Contingency / Risk / Opening Event Time																													
8	Striping																																						
9	Metering Lights to Toll Booths (Location 2) FWI - CCO 602																																						
10	Grind and Pave															Contingency / Risk / Opening Event Time																							
11	Striping																																						
12	East of Ponding Area (Location 1A) FWI - CCO 602																																						
13	Grind and pave																					Contingency / Risk / Opening Event Time																	
14	Striping																																						
15	Ponding Area to Toll Booths (Location 1B) FWI - CCO 602																																						
16	Ponding Area																																						
17	Excavate																																						
18	Lightweight Aggregate																																						
19	Base Material																																						
20	Grind and Pave																											Contingency / Risk / Opening Event Time											
21	Striping																																						
22	YBITS																																						
23	Move K-rail - MCM																																						
24	Polyester Overlay - CECSJV																																						
25	Stripe - MCM																																						
26	SAS - ABF																																						
27	No work anticipated on roadway																																						
28	Eastbound																																						
29	Oakland Touchdown - FWI																																						
30	Drainage System 14																																						
31	K-rail																																						
32	Excavate/Grind																																						
33	Pave																																						
34	Striping																											Contingency / Risk / Opening Event Time											
35	YBITS																																						
36	Move K-rail - MCM																																						
37	Type 732 Barrier - MCM																																						
38	Polyester Overlay - CECSJV																																						
39	Stripe - MCM																																						
40	Temporary Eastbound On-ramp - MCM																																						
41	SAS - ABF																																						
42	No work anticipated on roadway																																						
43	Remove Exisitng Upper Deck E23 to E39																																						
44	E23 to E33 (Steel) - MCM CCO 563																																						
45	E29 to E39 Temporary Structure (Concrete) - MCM CCO 563																																						
46	Temporary Bike Path																																						
	Set Bike Path Ramp MCM CCO 564S1																																						
	Set K-rail at Grade/Stripe - FWI CCO 401																																						
48	Bridge Opening Event															Set-up												Set-up		Event	Remove								
49	SAS Eastbound																																						
50	Oakland Touchdown Eastbound															Set-up												Compound in Service										Remove	
51	Oakland Touchdown Westbound															Set-up												Set-up			Event	Remove							
52	Bike Ride																																						
53	Bridge Run																																						
54	Bridge Walk																																						
55	Remove All Facilities																																						
56	Prepare for Opening																																						
57	Walkthrough Bridge																																						
58	Clean up activities																																						

Draft

Contingency

Bridge Closure Traffic Switch
Scope of work

May 31, 2013

Oakland Touchdown - Westbound

Area 1A – Westbound east of Ponding Area approximately 600 meters (CCO 602)

- Cold plane existing pavement
- Replace loop detectors east of the horse shoe
- Place 30mm of open grade AC
- Stripe

Area 1B – Westbound from the toll booths through the ponding area (CCO 602)

- In the approximately 100 meter long ponding area excavate 1.25+/- meter depth, backfill with lightweight aggregate, cap with 150mm of AB and 240mm HMA AC.
- Between the toll booths and the ponding area cold plane
- The entire area will receive 30mm of open grade AC and be striped

Area 2 – Westbound from the metering lights to toll booths (CCO 602)

- Cold plane existing pavement
- Replace loop detectors in Lanes 15 and 16 at the metering lights
- Place 30mm of open grade AC
- Stripe

Area 3 – Westbound from the metering lights to conform with the previously constructed new westbound roadway approximately 530 meters (Contract work and CCO 87)

- Remove existing K-rail from the westbound and eastbound detours
- Abandon drainage systems along the north edge of the westbound detour
- Cold plane existing pavement
- Stripe
- Install K-rail along southern shoulder (original plans had permanent barrier to installed along this 260 meter section. As a mitigation for the time required to install the electrical conduit, rebar and concrete for the 260 meters of permanent barrier planned during the closure, k-rail is being installed during the closure. The permanent barrier will be installed behind k-rail shortly after the traffic switch.
- The original stage construction included approximately 200 meters of shoulder widening along the southern edge of the westbound roadway. The area is to be excavated, backfilled with lightweight aggregate and paved. It has been determined that this work can be performed behind k-rail in advance of the SSO weekend.

Bridge Closure Traffic Switch
Scope of work

May 31, 2013

Oakland Touchdown - Eastbound

- Remove K-rail
- Excavate, install pipe, backfill drainage system 14 across the roadway
- Excavate and cold plane roadway as required to obtain proper grades
- Place open grade AC
- Stripe
- Final set K-rail on north and south sides of the roadway. As a mitigation for the time required to install the electrical conduit, rebar and concrete for the permanent barrier planned during the closure, k-rail is being installed during the closure. The permanent barrier will be installed behind k-rail shortly after the traffic switch. Drainage systems along the permanent barrier will also be deferred until after the closure.

YBI – Westbound

- Remove K-rail
- Polyester overlay tunnel to conform with previously placed overlay
- Stripe
- Place K-rail along south side of roadway

YBI – Eastbound

- Remove K-rail
- Polyester overlay tunnel to conform with previously placed overlay
- Stripe
- Place K-rail along south side of roadway
- Complete temporary eastbound on-ramp across current eastbound detour

West Spans

- Maintenance Activities

Temporary Bike Path

- Remove existing bridge upper deck from E23 east to E39
- Erect temporary bike path ramp
- Set K-rail for at grade portion of temporary bike path
- Stripe

I-80 Eastbound Connector Director's Order

- Polyester overlay and stripe

TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE
CALTRANS · BAY AREA TOLL AUTHORITY · CALIFORNIA TRANSPORTATION COMMISSION

Memorandum

TO: Toll Bridge Program Oversight Committee (TBPOC) **DATE:** June 3, 2013

FR: Andrew Gordon, Bay Bridge Spokesperson, BATA

RE: Agenda No. - 5b2
Item- Program Issues
Bridge Closure/Opening Communications Plan

Recommendation:
APPROVAL

Cost:
See below

Schedule Impacts:
N/A

Discussion:
The Toll Bridge Program Oversight Committee unanimously approved the Communications Plan for the closure of the original East Span and opening of the new East Span at its March 7 meeting. The plan outlines the proposed outreach elements that will be implemented to inform stakeholders and the public about the construction activities occurring during the closure take the original span out of service and put the new span into service.

Should the TBPOC announce on July 10 that the Labor Day weekend closure/opening will proceed as scheduled, the Bay Bridge Public Information Office (PIO) will launch the first of a few media events following that announcement. Those events will focus on construction (before, during and after the opening), transit/transportation planning during the closure and the alignment of the new East Span, with an emphasis on public safety.

Prior to launching these events, the PIO will present examples of messaging for the TBPOC's review and approval. The messaging will be included in various products, including;

- Press Releases
- Fact Sheets
- Transit Collateral
- Project Website
- Public Service Announcements (PSAs)
    - There are three contracts for the media buy, each for $250,000. One is to produce the PSAs, the other two are for statewide and regional media buys.
    - All three contracts have been advertised. Bids for the creative contract were due June 5, bids for the media buy contracts are due June 6.
    - The creative contract will be awarded June 18, the media buy contracts will be awarded June 20.

Attachment(s):
Toll Bridge Program Labor Day Weekend Original East Span Closure/ New East Span Opening Communications Plan

THE SAN FRANCISCO-OAKLAND
BAY BRIDGE SEISMIC SAFETY PROJECTS
CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

Toll Bridge Program Labor Day Weekend Original East Span Closure/ New East Span Opening Communications Plan

OVERVIEW

This plan outlines the proposed outreach elements that will be implemented to inform stakeholder entities and the public about the permanent closure and demolition of the original East Span, and the opening of the new East Span to traffic, including related opening celebration activities. Outreach efforts will educate all stakeholders about the construction activities occurring during Labor Day weekend in order to take the original span out of service and put the new span into service.

Outreach elements will also inform stakeholders about potential significant impacts to the general public and motorists in particular. Any specific communications plan will convey the importance of the final construction and related closure before achieving seismic safety and opening the new East Span to traffic, as well as transit and transportation alternatives to ease the inconvenience of the closure. The campaign will also educate motorists about the new alignment and driving experience once the new East Span opens.

The outreach effort will build upon the successes and lessons learned from the previous operations on the West Approach, YBI Viaduct Replacement, the YBI Detour Tie-In and Westbound Oakland Touchdown Detour, all of which required full or partial deck closures of the Bay Bridge. However, this closure is unlike any closure that has come before, as it marks the permanent closure of the original East Span. This plan will need to take the history and legacy of the original bridge into consideration. The plan will also incorporate information about the opening celebration that is being developed by the public-private partnership between the Toll Bridge Program Oversight Committee (TBPOC) and the Bay Bridge Alliance (BBA).

Media buys and large banners hung on or near the bridge were mainstays of previous efforts and will be necessary for this operation. The Public Information Office (PIO) will continue to innovate and leverage past successes, conduct advance planning with event venues, distribute information to statewide audiences, leverage numerous online and social media channels, innovate and implement new communications tools and target travelers into and out of the Bay Area. Those areas that will receive strong emphasis include:

- The project website, BayBridgeInfo.org
- Outreach to all media outlets, including local, statewide and national
- Social media channels including Facebook and Twitter, which will be essential for helping spread information
- Apps for mobile devices such as smart phones and tablet computers
- External websites, including those by sports teams, event venues, museums and other destination events and locations
- Banners, specifically on the Toll Plaza and Yerba Buena Island tunnel
- Investigate using electronic billboards adjacent to the Toll Plaza
- Transit agency coordination, including outreach to the trucking industry
- Coordinate with BBA, Hartmann Studios and other opening celebration stakeholders to incorporate basic information about the celebration into collateral

CRITICAL TALKING POINTS

Closure Overview

A narrative and specific talking points will be developed to convey the importance of the construction that will allow take the original East Span out of service and allow motorists to begin driving on the new East Span.

The campaign will also include a recognition of and appreciation for the 77 years of service of the original East Span. This campaign will present an opportunity for stakeholders to share their memories of the bridge and to commemorate what made it unique when first built in 1936.

Access & Transportation Alternatives

The PIO will also develop talking points about coordinating on an ongoing basis with BART, AC Transit, MUNI, Golden Gate Transit, Samtrans, Vallejo Ferry, Alameda/Oakland Ferry, Caltrain, Greyhound and Amtrak to determine and plan any necessary schedule or route changes, and to include transit agencies in the operational planning.

The TBPOC will coordinate with transit providers to plan alternative routes if needed.

The MTC 511 system will serve as the primary resource for trip planning and up to date traffic information. Any revised transit schedules will be available through 511.

Regular communication will be maintained with other bridges (Golden Gate, San Mateo-Hayward, Dumbarton, Richmond-San Rafael) on traffic and operational progress during the closure; staff stationed at Pier 7 during the closure will monitor traffic at other bridges and along major freeways and will communicate progress or any operation issues.

Media will be updated continuously of progress by press releases, construction information and graphics, and during the weekend closure, safe construction site access (when practical) and live PIO updates.

BayBridgeInfo.org and a dedicated micro-site will be the nexus for construction updates and information, and 511 will be referenced as the official source for trip planning and traffic conditions.

Changeable message signs will be used to inform motorists about the upcoming closures in the Bay Area region, and where appropriate beyond the region.

An automated telephone hotline will be maintained throughout the closure.

Outreach & Public Communication

A substantial public outreach campaign, the largest such campaign ever launched by the PIO, will be planned to inform motorists, residents and businesses about the bridge closure, as well as local, national and international stakeholders about the opening of the new East Span; the innovative nature of the new span, and its transformation into a global engineering icon, demands outreach beyond the Bay Area. Individual outreach efforts will build upon the successes of the previous operations on the West Approach and YBI Viaduct requiring full bridge closures of the Bay Bridge, as well as the full westbound deck closure during Presidents' Day weekend 2012 for the Oakland Touchdown Detour.

Leveraging these past successes, the PIO will expand coordination with East Bay cities and counties, conduct advance planning with event venues, distribute information to statewide audiences, and target travelers into and out of the Bay Area.

Bay Area elected officials and media will receive early notice of the announcement regarding the closures. Immediately after, the PIO will begin a massive outreach effort targeting motorists, transit riders, travelers into and out of the Bay Area, and affected residents and industries.

Media will be updated continuously of progress by press releases, construction information and graphics, and during the weekend closure, safe construction site access (when appropriate) and live PIO updates. Media will also be included in outreach regarding the opening of the new East Span.

BayBridgeInfo.org will be the nexus for construction updates and information, and 511 will be referenced as the official source for trip planning and traffic conditions.

Changeable message signs will be used to inform motorists about the upcoming closures in the Bay Area region, and where appropriate throughout northern and southern California.

An automated hotline will be maintained throughout the closures.

ELECTED OFFICIALS OUTREACH

The PIO will inform elected officials directly, regarding the construction and related closure.

2.1 Outreach

The PIO will inform local, regional and statewide decision makers and stakeholders through direct phone contact to their offices, as well as via e-mail. If requested, the PIO will hold briefing presentations to explain the operations and update audiences on project progress.

2.2 E-Alert

Electronic alerts will be sent to all elected officials and staff contacts, providing information on the construction and related closure, along with a link to a Fact Sheet that can be viewed electronically, shared, or printed. The first notification will serve as advance notice, and a second E-Alert will serve as a reminder a few days prior to the beginning of the operation.

SECTION THREE
MEDIA OUTREACH

The PIO will inform the media prior to, during and after all major elements of the work.

3.1 Media Outreach Sessions

Media in the San Francisco Bay Area and in surrounding media markets will be invited to a media outreach session in late spring 2013, up to four months in advance of the upcoming work. Separate media outreach sessions will be held regionally or in Sacramento or Southern California upon direction from the TBPOC. The PIO spokesperson will serve as lead spokesperson for opening/closure related outreach; additional spokespersons may need to be identified leading up to the closure weekend.

Graphics, video and informational Fact Sheets will be distributed. These sessions are intended to raise media awareness, inform media of upcoming work, provide current contact information, foster collaborative working relationships, and solicit feedback on how to improve our outreach. As the closure draws closer, the PIO will include national and international media in its outreach, as the new East Span will garner media interest around the globe.

3.2 Press Releases

The PIO will distribute a general press release in late spring 2013 when the opening dates are announced and prior to the closure. Media press advisories will be issued at regular intervals prior to the closure to keep media up-to-date on construction activities. A press release will be issued prior to the completion of the operation to keep media updated on the opening of the new East Span and related celebration activities.

3.3 Public Information Officer Live Update

A spokesperson (PIO) will be on-site throughout the closure. A media hold location may be made available within or adjacent to the Pier 7 Construction Campus. PIO staff may provide escorted and limited access to the operation. Live updates to the media will be facilitated at this location. The PIO will develop talking points ahead of time and construction staff will provide real-time construction updates to the PIO for sharing with media.

SECTION FOUR
PUBLIC OUTREACH

The PIO will inform the public through a broad outreach campaign designed to inform as many potential weekend users of the Bay Bridge as possible. The targeted user groups will include Bay Area motorists, regional commuters, goods movement industries, out-of-town holiday travelers and the general public. Notices will be provided months in advance in some cases.

4.1 Public Service Announcements

Paid public service announcements will run in television, print, radio, online and movie theater media to share information with the general public within two months of the closure. Markets throughout the state will be targeted. Detailed graphics will be included in the messaging to help show the public the work that will be performed. Messaging will focus on keeping traffic away from the bridge approaches and encourage motorists to seek alternative transit and driving options. Caltrans will procure the media buy contracts.

4.2 Transit Agency Coordination/Trucking Industry Outreach

The PIO will coordinate on an ongoing basis with BART, AC Transit, MUNI, Golden Gate Transit, Samtrans, Vallejo Ferry, Alameda/Oakland Ferry, Caltrain, Greyhound and Amtrak to inform transit riders of the upcoming bridge closure. Each of the agencies will distribute information to riders and staff. In addition, MUNI buses will display placards. Throughout the closure, daily updates will be given to the other bridges (Golden Gate, San Mateo-Hayward, Dumbarton, Richmond-San Rafael) on traffic and operational progress, from traffic monitors based at Pier 7 during the closure. The PIO will also engage in outreach to the trucking industry, to make sure its members and drivers are aware of the closure and any impact that could have to the transportation of goods.

4.3 Website

All outreach materials will direct stakeholders to the BayBridgeInfo.org website for the latest information and updates about closure, related construction and new East Span opening. The website will have a dedicated project page that will serve as a central hub for all information about closure. This includes graphical and text information on the work and the schedule; information on the transit alternatives available, including links to each transit operator and to 511; links to radio and television announcements, and other informational materials. The website includes a comment form for users to send questions or feedback 24 hours/day as well as contact phone and address information for the Public Information Office and telephone hotline.

The dedicated project page will focus on driver education to make all commuters well aware of the new alignment. This strategy will be implemented using simulations and visualization tools, and will encourage sharing of media among public at-large. We will focus resources on debuting the micro-site four to six months prior to the closure, and to deploy already developed mobile phone and tablet apps (shareable resources that capitalize on the gee-whiz factor), use social networks for cost-effective saturation of the video and app products, which also connect back to BayBridgeInfo.org, engaging the public automatically on the closure campaign.

4.4 External Websites

Outreach efforts for the closure will focus on increasing avenues of electronic communication. This means leveraging the websites and social media channels of destinations throughout the Bay Area to share basic information about the closure as well as a link to BayBridgeInfo.org. These websites include:

Travel Sites: Links on partner websites in the travel industry: AAA, major airlines flying into SFO and Oakland Airports, major booking sites (i.e.-Expedia, Orbitz, Travelzoo, etc.), airports and a link on the California Welcome Center and local convention and visitor bureau websites.
Sports Team Websites: Information and BayBridgeInfo.org link on local sports team websites to include: the San Francisco Giants, the San Francisco 49ers, the Oakland As, the Oakland Raiders, the Golden State Warriors and the San Jose Sharks.
Sports/Event/Venue Sites: Information and our website link on sites where the public goes to purchase tickets to sports, concerts and theater events. These would include: Ticketmaster, Livenation, and StubHub.
Community Message Boards: Posting information and internal website link on craigslist.org, a heavily-trafficked local site in the Bay Area and other cities, and sites that list local events such as OnlyinSF.com and SFGuide.com.
Museums/Zoos/Parks/Attractions: Posting information and BayBridgeInfor.org link on websites for major museums (e.g. Museum of Modern Art, Oakland Museum), zoos, national and state parks and other attractions.
Festivals/Events/Conferences: Posting information and link on websites for any events occurring during the closure weekend.
GPS/Mapping Sites: The PIO will research incorporating information and an internal web link on sites that provide traffic mapping and directions such as Google maps, Yahoo maps and Mapquest. There will also be research into possible coordination with sites that link traveler's GPS systems such as OnStar, TomTom and Garmin.

4.5 Informational Flyers/Fact Sheets

PIO will develop informational materials, including a Fact Sheet, for distribution through predominantly online channels. The Fact Sheet includes dates and times of the closure and anticipated opening, the rationale for conducting this operation, transit and driving alternatives, as well as background information on the Bay Bridge Seismic Safety Projects

Distribution
Where possible, The PIO will coordinate with the following entities to provide electronic Fact Sheets for distribution to their constituents/employees/stakeholders:

- Local/corridor businesses
- Neighborhood newsletters and other publications
- Taxis and shuttle services, airports, hotels, car rental agencies, visitors bureaus, the State Tourism Office, Chambers of Commerce and automobile associations
- Hospitals, major employers, funeral homes, farmers' markets associations, carpool centers, parking garages, malls
- Major regional and local entertainment and sports venues for the SF 49ers, the Oakland Athletics, the SF Giants, and the Oakland Raiders. The PIO will also contact university sports venues, including UC Berkeley, Stanford, and local Cal State campuses, regarding home games over the Labor Day weekend.
- Cities from San Luis Obispo to Sacramento in the target market areas (Bay Area, Central Valley, Southern California, Sacramento)
- Ferry operators, bus transit and rail operators, transit centers, Bay Area Rapid Transit, the Water Transit Authority, and the San Francisco Metropolitan Transportation Agency
- San Francisco Municipal Railway (MUNI)
- State and local offices of the California tourism agencies and convention bureaus
- Approximately 5,000 organizations and private citizens on the Bay Bridge Public Information Office contacts list
- Festival associations and city permit offices
- Area attractions (zoos, museums, etc)
- Labor and credit unions (CTA, CALPERS, etc)

- Area school districts
- Car rental agencies
- The Department of Motor Vehicles
- Weigh stations for semi trucks coming into the area
- Community groups for Seniors such as AARP, Knights of Columbus, the VFW, etc.

4.6 Social Media

Social media on the Internet has become a fundamental source for many users to interact and receive their news and information. Social Media outlined for this campaign include Twitter and Facebook. Selecting key websites to link with BayBridgeInfo.org will reach a greater audience with less effort.

This social media application adds significant potential for both delivering the current message and increasing regular follower traffic to the project's information resources. The Bay Bridge's more than 8,400 Twitter followers and more than 4,300 Facebook followers have the potential to help spread the Bay Bridge messaging to their own followers.

Collateral will also encourage stakeholders to follow the Bay Bridge on Twitter and Facebook to get the latest information and updates, particularly during the closure weekend.

4.7 Mobile Device Apps

Bay Bridge Explorer was a successful foray into mobile apps for smart phones and tablet computers during the Oakland Touchdown Detour campaigns. The app allowed users to "drive" the detour via an interactive driving simulation that educated motorists on what to expect when the detour went into effect. The next iteration of Explorer will include a driving simulation across the new East Span. The app will be launched during the campaign. The first iteration of Bay Bridge Explorer was downloaded more than 10,000 times. Bay Bridge Vision, an already develop app that focuses on the bridge's design and architecture, will also debut during the outreach campaign.

4.8 Banners/Electronic Billboards

The PIO will post banners at multiple locations to guide the public on where to go for more information on the upcoming work and motorist impacts. The banners will be posted in advance and will point motorists and the public to BayBridgeInfo.org, and 511. The PIO will also investigate using the electronic billboards near the Toll Plaza to promote the closure and detour.

4.9 Telephone Hotline

The PIO will provide an automated telephone hotline at the Public Information Office for motorists to access daily updates on construction-related lane and ramp closures and other construction information, and for local affected residents and businesses to have direct contact with PIO staff.

4.10 Changeable and Electronic Message Signs (CMS's)

The PIO will engage a statewide network of electronic and changeable message signs two weeks prior to the closures to alert motorists. Signs will be especially intensive in the Bay Area; the PIO will work closely with Caltrans districts throughout the state to ensure that the message will be highly visible along major thoroughfares.

4.11 E-Alert

An electronic alert (E-Alert) will be created and sent to elected officials, stakeholders and the public. Thousands of project contacts will receive the E-Alert well in advance of the closures, providing information on the upcoming demolition and linking to a Fact Sheet that could be viewed electronically, shared, or printed in hardcopy. An additional (reminder) E-Alert will be sent a few days before the closure.

4.12 Out-of-town Traveler Notification

The PIO will focus additional efforts to target out-of-town travelers visiting the Bay Area during the closure weekend, who might be impacted by the Bay Bridge closure. Many elements of the outreach plan will be implemented earlier than in past efforts, and extended to additional metropolitan regions in California. Visitor Bureaus, recreational venues, and other traveler services will be included in all possible aspects of the outreach plan. Information will be distributed to hundreds of California cities, the Weather Channel and on the California Department of Tourism website. Information kiosks at major airports in the Bay Area throughout the four-day operation will provide information.

4.13 MTC 511 Coordination

The PIO will continue to collaborate with MTC staff responsible for the 511 Transit Information system on the upcoming work and the changes to transit schedules as a result of the closures. MTC incorporates the revised schedule information on their voice-activated system and the MTC 511 (www.511.org) website. Furthermore, MTC posts a graphic banner announcing the Bay Bridge Construction and Closures on the homepage pointing users to BayBridgeInfo.org for information.

The PIO will make use of MTC's informational kiosks at locations such as the Embarcadero BART Station and the Bay Crossings Store at the Ferry Building as an additional method of communication.

SECTION FIVE
CALTRANS INTERNAL COORDINATION

5.1 Command Center

Caltrans staff will continue to hold regular meetings to review ongoing public issues relating to the project. During the operation, a Command Center will be established for all key agencies to be able to coordinate closely together. Traffic operations and the Public Information team will maintain a direct line of communication to provide timely reports of conditions during the closures.

5.2 District 4 Coordination

Public Affairs Office

The Bay Bridge Public Information staff communicates regularly with the District 4 Public Affairs staff to help ensure that district staff is informed and to identify potential areas for collaboration.

District Director's Office

Presentations on the public outreach strategy and implementation elements will be made to the District Director and Director's Staff as directed.

Traffic Operations

Caltrans holds intermittent meetings between key District operations staff on all of the projects along the Bay Bridge Corridor. The Traffic Management Center addresses the anticipated needs of the operation by joining the Command Center, and by assisting on the public outreach effort through the operational elements, such as Changeable Message Signs.

5.3 Agency and Executive Staff

CT Headquarters, including the Director and the TBPOC agencies, are given a presentation on the scope and impacts of the work prior to the beginning of work. The TBPOC will review the Outreach Action Plan in March 2013. Caltrans Headquarters (Lane Closure Review Committee) will be briefed in spring 2013 following the TBPOC's approval. Regular communications and updates on the public outreach strategy and implementation will be made to the Public Affairs Office, the Caltrans Director and Director's Staff.

5.4 Department Informational Letter

Caltrans distributes an informational fact sheet electronically to District 4 staff on the upcoming work. The Fact Sheet includes dates and times of work and the associated closures, as well as transit and driving alternatives.

5.5 Coordination with other Caltrans Districts

Caltrans works with other Districts to extend messaging on key highway Changeable Message Signs in those districts, as well as in distributing Fact Sheets to all District staff.

SECTION SIX
PROPOSED PRESENTATION CALENDAR

MARCH/APRIL	POC Approval of Outreach Plan
	District Executive Staff Presentation
	Caltrans Lane Closure Review Committee Presentation
	BATA Commission Presentation
	Elected Officials Legislative Outreach Meetings
	Media Outreach Meeting
	Key Stakeholder Presentations (Including TIDA, CCSF, SF Giants, Oakland A's, UC Berkeley (Cal) Football, Oakland Art & Soul Festival, Golden Gate Bridge, Cities of Hayward, Marin, Larkspur, San Rafael, County Transportation Authorities)
	Transit Agency Coordination Begins
	External website strategy planning
MAY	Telephone Hotline
	E-Alert distributed to Bay Bridge contacts
JUNE	Website updates
	E-Alert distributed to Bay Bridge contacts
	E-Alert and flyers to Bay Bridge contacts, including Treasure Island/YBI residents, taxis and shuttle services, airports, hotels, car rental agencies, visitors bureaus, Chambers of Commerce, hospitals, major employers, entertainment venues, city and county governments, transit, and tourism agencies
	Transit Ridership Outreach
	MTC/511 Coordination
	Caltrans Employee Notification
	E-Alert distributed to Bay Bridge contacts
JULY/AUGUST	E-Alert distributed to Bay Bridge contacts
	Public Service Announcements and online campaign begin
	E-Alert to Elected Officials
	Banners posted
	Electronic Message Signs and HAR begin
	Media Advisory
	E-Alert distributed to Bay Bridge contacts
	Weekend site access for media
	PIO Live Updates

Press Release announcing re-opening of Bay Bridge

ITEM 6: OTHER BUSINESS

No Attachments